

O.C.S. OVERSIGHT OF 1978 AMENDMENTS—PART 1

HEARINGS
BEFORE THE
SELECT COMMITTEE ON THE OUTER
CONTINENTAL SHELF
HOUSE OF REPRESENTATIVES
NINETY-SIXTH CONGRESS
FIRST SESSION
ON
OVERSIGHT ON THE
OUTER CONTINENTAL SHELF LANDS ACT
AMENDMENTS OF 1978

MARCH 8, 14, 20, MAY 7, 14, 1979

Printed for the use of the Select Committee on
the Outer Continental Shelf



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WASHINGTON : 1979

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OCS OVERSIGHT OF 1978 AMENDMENTS

THURSDAY, MARCH 8, 1979

HOUSE OF REPRESENTATIVES,
SELECT COMMITTEE ON THE OUTER CONTINENTAL SHELF,
Washington, D.C.

The committee met, pursuant to notice, at 9:30 a.m., in room 1334, Longworth House Office Building, Hon. John M. Murphy, chairman, presiding.

Present: Representatives Murphy, Hughes, Studds, Miller, Forsythe, and Young.

Also present: Representative Emery.

Staff present: Carl Perian, staff director; Lawrence J. O'Brien, Jr., chief counsel; Tom Kitsos, counsel; Bud Drago, minority counsel; Kate Bonner, Tom Tackaberry, Bob Shea, and Bill McGuire, committee staff.

The CHAIRMAN. The committee will come to order.

Today the OCS Committee will begin our second round of a planned series of oversight hearings on the implementation of Public Law 95-372, The Outer Continental Shelf Lands Act Amendments (OCSLA) of 1978.

During our December oversight hearings, the OCS Committee compiled a public record on the status of regulation implementation, identified real and potential problem areas, and focused on the concerns of industry, State, environmental and executive branch representatives. The oversight hearings were responsible for the Department of the Interior preparing an implementation schedule for the public. Those preliminary oversight hearings also highlighted the customs issue regarding the import duty exemption for oil rigs transported from lesser developed countries.

These and other offshore oil issues have been in the forefront of the news:

On February 20, 1979, in the case of *Massachusetts v. Andrus*, the U.S. Court of Appeals cited the work of the OCS Committee, and permitted lease sale No. 42 to proceed. In his decision, Judge Campbell noted the:

* * * solemn responsibility to see that the great life systems of the ocean are not unreasonably jeopardized by activities undertaken to extract oil and gas from the seabed. * * * he observed that the OCSLA seems: * * * to reflect Congress' underlying belief that mineral development can be so orchestrated with the development and presentation of renewable resources like fish and to do no irreparable harm to them. It is left to the Secretary to harmonize the interests of the various resources whenever they impinge upon one another.

As the court's statement indicates, Government oversight of offshore development is clearly and necessarily a joint partnership between the Congress and the executive branch.

Just last week, President Carter exercised his authority under the Trade Act of 1974 and decided to subject offshore rigs constructed in certain foreign countries to a 9½-percent import duty. This decision followed efforts by a distinguished member of this committee—Mr. Miller of California and other committee members, to end the exemption which had permitted some U.S. companies to build rigs with foreign labor while also avoiding payment of American duties.

Within the last several days, a disastrous blowout on Placid Oil Co. Charlie Platform No. 17, in the Gulf of Mexico, has taken three lives with five employees still missing. This tragic turn of events exemplifies the need for rapid progress in implementing the provisions and safety requirements of the 1978 OCS amendments.

Hardly a week passes without some reminder of the necessity to move forward on offshore oil development. As recent events in Iran vividly demonstrate, our oil and gas imports have become our lifelines, which can be severed at any moment by events beyond our control. Ten percent of our foreign oil comes from Iranian oil fields—now virtually shut down. Unlike these imports which are subjected to political whims, and can be cut off at any time, the production of domestic oil off our coasts is under our control.

During the 4-year battle for OCS reform, I maintained, and still maintain—that timely and proper implementation of the OCS Act will not cause substantial delays in offshore development. The Interior Department held the same position and the executive branch has assured us all along that the implementation process was ready to be rapidly initiated upon enactment.

While there has been a flurry of activity in the Federal Register to carry out the act since our December hearings, few major regulations have been promulgated in final form.

We have already witnessed slippage in the implementation schedule, and the practical difficulties involved in carrying out the act becomes more apparent as each week passes. At our December oversight hearings regarding onstructure drilling, it was indicated that proposed regulations would be published within several weeks. In reality, that has translated into months.

December testimony also indicated that an interim study on the marine insurance industry was due by December 18. While work is underway, the necessary authority was delegated only last week, and it may be June before we see a final work product.

The failure of the executive branch to activate the special purpose funds established by the act as swiftly as possible can only delay the leasing program and cripple the environmental safeguards we so carefully provided for our fishermen, shoreline, beaches and other natural resources.

For example, the 2-year study of obstructions on the OCS, a major feature of the fisherman's contingency fund, has been eliminated from the Department of Commerce funding request by OMB. This is totally unacceptable.

Furthermore, if the revenue sharing provisions that were placed in the act to enhance State and local participation in the OCS decisionmaking process are to have real meaning, adequate funding is essential. If we really mean to assist the coastal States in ameliorating the adverse impacts of OCS activities, and if the

coastal zone management program is to continue to be effective, the coastal energy impact program must also be properly funded.

I would point out that State, industry, and environmental representatives alike have continuously supported the continuation of the OCS Committee through the implementation process. As you know, I have introduced a resolution for just that purpose and that matter is now pending before the Rules Committee. It would be unforgivable to disband the OCS Committee at this juncture and fragment OCS jurisdiction in the House of Representatives.

As we develop the 5-year leasing program that will affect OCS development for decades to come—we cannot afford a “business as usual” approach. We must develop an ambitious agenda that will rapidly bring about some semblance of energy independence.

As this week’s headlines vividly demonstrate, implementation of OCS regulations cannot come too soon.

Secretary of Energy Schlesinger’s ominous predictions of oil shortages suggest that the supply crisis may be just beginning.

On the other hand, the drive to increase oil and gas production cannot outweigh the need to protect human lives on the Outer Continental Shelf. Nor can we overlook environmental concerns.

Balancing these interests while moving ahead as soon as possible is our principal interest here today.

Our first witness today will be Ms. Heather Ross, Deputy Assistant Secretary, Program Policy and Budget Administration of the Department of the Interior.

Ms. Ross, I would like to yield to Hon. Edward Forsythe of New Jersey, the ranking minority member, at this time.

Mr. FORSYTHE. Thank you, Mr. Chairman. I do have an opening statement that I would like to make at this point.

As you know, I voted against passage of the conference report on S. 9 because I felt that many provisions of the bill were duplicative, would create mountains of Federal redtape, and that the legislation could cause delays in exploration and development by requiring the drafting of 25 to 40 sets of new regulations.

I expressed these concerns during the consideration of the legislation, but my claims were denied. While I was hopeful that perhaps I was mistaken, my worst fears were confirmed not only as a result of the oversight hearings held by this committee on December 6 and 7, but by information I have received since that time from various sources.

During the hearings in December, all of the representatives from the private sector and from the States complained in chorus that the Federal departments and agencies were dragging their feet in implementing Public Law 95-372. I also found out that Public Law 95-372 requires the drafting of at least 20 sets of new or revised regulations.

This committee was charged, when it was created in 1975, with the responsibility of amending the 1953 OCSLA for the purpose of accelerating exploration and production of OCS energy resources. In September 1978, this committee, in response to the wishes of three Presidents and two Congresses, was successful in having S. 9 signed into law by President Carter. However, a major part of work remains undone, and that is implementation. Mr. Chairman, you referred to this in your statement very adequately.

When the 1953 act was signed into law, this Nation was a major exporter of energy. When the committee was established, we were importing approximately 29 percent of our domestic oil needs. Last year we imported approximately 50 percent of our needs.

I believe that we have finally learned our lesson—that it is foolhardy to rely on the future goodwill and stability of foreign nations for oil needs. Positive steps must be taken to decrease this dependence on sources beyond our control. In spite of its faults, I believe Public Law 95-372 can make a significant contribution to this end if it is implemented without any further delays and in accordance with congressional intent.

It took 4 years and two attempts at passage to create a law that would accelerate OCS energy activities, provide the environment, increase competition, and provide a fair return for the leasing of public energy resources. However, since the legislation was signed into law almost 6 months ago, only one standard and one regulation have been finalized.

All of the 11 Federal departments and agencies that have responsibilities under the provisions of Public Law 95-372 were aware for at least 2 months what the provisions of the law would be. In addition, we were repeatedly informed by the departments that there would be no delays in implementation because many of the regulations were already promulgated due to authority under the 1953 act, or being compiled in anticipation of passage of S. 9.

The purpose of these hearings is to follow up the December hearings and to determine why there has been such a drawn out delay in proposing regulations.

I, for one, have received numerous letters from various segments of our economy as well as hearing from some States, complaining that not only were there delays in implementation but that there seemed to be an effort to hold back on putting the new OCS program in effect.

We should have learned a lesson from activities in Prudhoe Bay, the North Sea, and from exploration activities in the Baltimore Canyon. Exploring for oil and gas is a game of chance. In Prudhoe Bay, they were ready to stop drilling before hydrocarbons were found. The North Sea took numerous exploratory wells before there was a significant find. The Baltimore Canyon, never considered a particularly rich source of hydrocarbons, appears to have a great deal of oil and gas resources, but not where it was first thought to be. Only more active exploration will finally determine the future of the canyon, as well as the entire OCS.

In the past, the executive branch has expressed a desire to work closely with this committee in order that we can put together an effective program to accelerate the production of the considerable energy resources on the OCS, and it is in this spirit that we are meeting here today.

Mr. Chairman, I believe Mr. Young has an opening statement.

The CHAIRMAN. Does Mr. Hughes have an opening statement?

Mr. HUGHES. No, Mr. Chairman. I would defer at this time.

The CHAIRMAN. Mr. Young.

Mr. YOUNG. Mr. Chairman, members of the committee, I will make my opening statement very brief, as I must attend another hearing dealing with oil and gas problems in onshore areas. How-

ever, I would like to touch on one or two problems that disturb me both as a member of this committee and as the Representative of the State of Alaska.

In the 95th Congress, this committee took the lead—and I compliment the chairman for this—in passing a comprehensive set of amendments to the OCS Lands Act. Passage of these amendments followed over three years of hard work. Through the legislative process, this committee gave a mandate to the administration to accelerate, under proper procedure of law and with sound controls, the exploration and development of our off-shore oil and gas resources. Unfortunately, the administration has taken actions, at least in Alaska, to stymie that mandate.

Let me give you some examples. The three offshore areas in Alaska that have the best oil and gas potential are in the Beaufort Sea, Norton Sound and Bristol Bay. Two of these are being recommended for marine sanctuary designation by the Department of Commerce. Further, if the proposed marine sanctuary regulations published by the Department of Commerce on February 5, 1975, are ever finalized, we will not even be able to go fishing in these areas, much less explore for and produce oil and gas. These proposed regulations have prompted the State of Alaska to take a hard look at its support of marine sanctuaries. Let me put the administration on notice, I am not going to be supporting marine sanctuaries if they have that kind of regulation proposed.

In addition, development of the Bristol Bay basin may be foreclosed by the administration's recommendations for wilderness in the Becharof Refuge under the Alaska lands bill. This would preclude the necessary pipeline access from Bristol Bay. Certainly the oil is there. However, as one staff member of the Department of Energy remarked at a recent briefing, "we don't know" how to get it out.

The recent crisis in Iran, the international commitment to lower foreign oil use by 5 percent, and the frequent statements about \$1 per gallon gasoline have shown us that we need to locate and develop these new sources of oil. The administration seems to be opposed to drilling onshore, since the best potential deposit in the United States, in the Arctic Wildlife Range in Alaska, has been characterized by Secretary Andrus as the "last place we should look." Furthermore, the Department of the Interior has already announced that they will cease exploration activities on national petroleum reserve No. 4 in 1980. This, in spite of the fact that no serious exploration has taken place and that no firm program or commitment was ever made to adequate explore these areas. Instead, the Department of the Interior tells us that there is no oil in the area. Let me remind the committee that the same thing was said about Cook Inlet and about Prudhoe Bay before the big well came in, including Texas.

It is obvious to me that the administration does not want to find any oil and gas. It is the charge of this committee and our duty to the citizens of the United States to see that the mandate to explore for and develop our Nation's oil and gas resources is carried out.

I commend you for bringing this meeting, having this discussion, and hopefully at the urging of this committee and the committees

of the Interior, we will get the administration moving in trying to solve the energy problems of this Nation.

The CHAIRMAN. Thank you, Mr. Young. We appreciate those remarks.

Secretary Ross, would you identify the gentlemen assisting you today?

STATEMENT OF MS. HEATHER ROSS, DEPUTY ASSISTANT SECRETARY, POLICY, BUDGET AND ADMINISTRATION, DEPARTMENT OF THE INTERIOR, ACCOMPANIED BY DR. DON E. KASH, CHIEF, CONSERVATION DIVISION, U.S. GEOLOGICAL SURVEY; GERALD RHODES, STAFF ENGINEER, U.S. GEOLOGICAL SURVEY; DON TRUESDELL, ACTING ASSISTANT DIRECTOR, MINERALS MANAGEMENT DIVISION, BUREAU OF LAND MANAGEMENT; AND AL POWERS, DIRECTOR, OFFICE OF OUTER CONTINENTAL SHELF PROGRAM COORDINATION

Ms. Ross. Yes, I will, Mr. Chairman.

On my right is Don Truesdell; he is the Acting Assistant Director, Minerals Management Division in the Bureau of Land Management; on my left is Alan Powers; he is the Director of OCS Program Coordination.

Beyond him is Mr. Don Kash, who is Acting Chief of the Conservation Division of the U.S. Geological Survey, and with him is Mr. Gerald Rhodes, who works in the Survey.

The CHAIRMAN. If you will proceed.

Ms. Ross. Thank you, Mr. Chairman.

It is a pleasure to be here today for the second oversight hearings to be held by this committee. The Department of the Interior appreciates the time and effort you are devoting to this important domestic oil and gas program. I thank you for the assistance you have given us, and continue to give us.

Since the last time the committee met on this subject, the Department of the Interior has been busy implementing the provisions of the 1978 Amendments to the OCS Lands Act and maintaining the leasing schedule that was published in August.

A great deal of effort has gone into the implementation of the amendments. Not only have efforts by the Department of the Interior been extensive, but other departments, with specific authorities, have been hard at work as well.

The Department of Commerce, for example, is well along in establishing the Fisherman's Contingency Fund, and the Coast Guard expects to meet the statutory deadline of March 17 for promulgation of final rules pertaining to the Oil Spill Pollution Fund.

As to the Department of the Interior, most of the required changes in the regulations have now been published in the Federal Register for comment. A copy of the schedule which the Secretary of the Interior has set for these draft and final regulations has been provided to your staff.

The Bureau of Land Management has published all regulation changes within its areas of responsibility to implement the provisions of the amendments. These regulations, found at 43 Code of Federal Regulations, part 3300, were proposed in February. Final rules are planned for June of this year. The Geological Survey has

published two major regulation changes and additions, again, as a draft, for comment.

In January, extensive changes in the regulations on exploration and development and production plans, 30 CFR 250.34, were published for comment. After reviewing and considering written and oral comment on the proposed rules, we will prepare final rules which we expect to publish in May.

Another extensive change in regulations, 30 CFR 252, dealing with the oil and gas information program, was published for comment in January, and final rules are again planned for May. With two exceptions, the remainder of the changes needed in the Geological Survey regulations are scheduled to be published for comment next week, with final regulations due in June.

The two exceptions are for provisions of the amendments where the department felt it needed public input before drafting proposed rules. The first of these is air quality.

The amendments require the Secretary of the Interior to control activities on the OCS which significantly affect the air quality of a State.

An advance notice of Proposed Rulemaking was published in the Federal Register in December 1978, asking for comment and information on several aspects of air-pollution control. Over 40 respondents suggested various interpretations of the statute and the methods to be used for implementing its provisions. The regulations being drafted for publication this month as proposed rules are based on the information we received and are designed to help assure that activities on the OCS will not impede the efforts on-shore to achieve clean air standards.

The second area where we sought public input as a first step was best available and safest technologies. Again, we have asked for comment and suggestions on a number of points. We anticipate useful responses from industry, environmental groups, and others.

One last item I wish to discuss is the 5-year leasing program.

As required by the statute, we have begun to draft a leasing program which will control the timing and location of lease sales for the 5-year period beginning in March 1980, 18 months after enactment of the statute.

Comment has been solicited, and received, from industry, the States and local government, environmental groups, private parties, and other Federal agencies in response to a request published in the Federal Register in October.

These comments on where to lease, when and under what constraints, were voluminous and have now been analyzed. Proposals were drafted for the Secretary's consideration and, after his decision, a draft proposed leasing program was prepared for his approval. When he approves it, the proposed program will be sent to the Governors of the coastal States for further comment. We expect that in a matter of days.

This is where the activity stands at this time.

The Governors' responses will be taken into account prior to forwarding a proposed leasing program to Congress in June of this year. We expect to be able to comply with the time constraints established in the statute and have a final leasing program published by March 1980.

In summary, Mr. Chairman, we have been working hard to implement the provisions of the OCS Lands Act Amendments. At this point, 6 months after enactment of the amendments, virtually all rule changes have been drafted and are available, or will be available next week, for public comment.

The two provisions which are on a different track have had advance notices of rulemaking published and are on schedule. The provisions of titles III and IV, the oil-spill and fisherman's funds, and for a 5-year leasing program, are on established schedules for implementation. We expect virtually all regulations to be in place in final form by the end of June—10 months from enactment.

This, we think, is an ambitious schedule for taking a major, Federal operating program and overhauling it. It is being done without any increase in resources but with a great increase in workload and productivity of the people involved. These are the same people who run the ongoing offshore oil and gas program, and they have been able to continue that program on its established schedule. This has allowed us to bring the new authorities and requirements of the amendments into place while continuing an important program in our national effort to develop needed domestic supplies of oil and gas.

We think it is a good record, Mr. Chairman, and I would like now to answer any questions you may have.

The CHAIRMAN. Thank you, Ms. Ross.

Congressman Hughes?

Mr. HUGHES. Thank you, Mr. Chairman; and thank you, Secretary Ross. Welcome to the committee.

It is my understanding from your testimony that the Interior has drafted proposed regulations which bear on the subject of the leasing plan, the 5-year plan, from which the target date of March 8 has been determined for implementation.

I wonder if as part of that plan the Interior is attempting to determine the other side of the balance sheet; that is, the ability of industry to assimilate leases over a 5-year period?

In the past, we have leased acreage, hoping that industry would have the ability to assimilate those leases and develop expeditiously the tracks to determine whether hydrocarbons exist.

In many instances, we have found that industry does not have the capital or the equipment. In other instances, they do explore expeditiously. Is that one of the components that the Department of the Interior is considering in a lease plan?

Ms. Ross. Yes, sir, we are.

Regulations governing the 5-year leasing program were published in final form before we began the process. They restate essentially the provisions of the act.

One of the considerations is the ability of industry to explore and develop expeditiously. We have received a proposal for energy goals for the OCS from the Department of Energy; they explicitly address that question of capital and rig availability in their constraint section. I expect they will be discussing this with you later on, but they point out that those are not constraints in achieving an optimum OCS schedule of the order of magnitude that they believe will meet our production goals.

Also, as you know, the Secretary of the Interior is very determined to have diligence in exploration and production and he stated that a number of times.

Mr. HUGHES. Yes. And I think the Secretary has, just in the last few years, done a tremendously good job in addressing that particular issue.

What specifically is Interior doing to improve its capability to identify capital shortfalls or limitations on equipment?

Ms. Ross. We are looking to the economic analysis that was done by the Department of Energy for that and we have also gathered information from industry ourselves, which we have prepared for the Secretary to consider in his 5-year leasing program decision; so that as provided by statute, we have gone out to the parties who can provide that information in the industry and collected it, their responses to us, and analyzed it as part of the developmental program.

Mr. HUGHES. Are you relying on what industry submits to you or are you making independent evaluations?

Ms. Ross. We are looking at it and discussing it with the Department of Energy.

Mr. HUGHES. Do you presently have the computer capability to make a determination as to what equipment, particularly rigs, is available at a given time, and what is projected to be available in the foreseeable future?

Ms. Ross. We do not have a computer-based capability for that at this point. The Secretary is relying on a two-pronged approach.

He will offer leases but he expects them to be diligently explored and developed. If they are not, he will take them back. So that we get fair market value when we lease it, if it is not explored and developed, we will receive it back and we will offer it again; but we are intending that diligence requirements be observed so that if there is a problem with the availability, which we do not see, and which the Department of Energy does not indicate, it would be a problem of the industry not being able to follow through on what was received.

Mr. HUGHES. It seems to me that has been one of the major blind spots in our leasing program. We have not looked, I think, seriously, at the other side of the sheet, I do not think we can develop a comprehensive leasing program such as contemplated by our legislation unless we develop the capability to make an independent evaluation as best we can, of industry's ability to expeditiously explore additional acreage. We have over 16 million acres presently in private ownership held mostly by major oil companies, and one of the criteria I think we have to look at very seriously in the years ahead is industry's ability to accept new acreage and develop expeditiously what they have in addition to any acreage that is made available; and I do not see how we can do that without trying to develop some type of computer capability in the Department of the Interior.

I hope that Interior will take a look at that more seriously.

Let me switch for just a moment, if I may, to onstructure stratigraphic drilling.

As I understand it, regulations have been promulgated, noticed in the Record and are being analyzed at the present time; is that correct, the comments are being analyzed?

Ms. ROSS. Yes; that is correct.

Mr. HUGHES. One of the things that is proposed by Interior is an immediate release after a permit is granted and onstructure stratigraphic drilling takes place of any significant finds; a public release; and I wonder if you could tell me the rationale behind that; if indeed, what we are trying to do is to encourage consortiums, prior to a lease sale, to explore onstructure, then I wonder if we are not defeating the purpose if we require them to make public any significant finds?

Ms. ROSS. That is a provision that is in the regulations that we currently have; that is, it is not something that we introduced for onstructure drilling.

Mr. HUGHES. I understand that. But I question the wisdom of it. I wonder if that is not defeating the purpose of permits for onstructure stratigraphic drilling?

Ms. ROSS. We are concerned also that disclosure not be a basis for persons not being willing to undertake onstructure drilling; and to that end, as you probably noticed in the regulation, we have very substantial penalties that we provide for people who will buy into that information once a disclosure of a find has been made. The intention of that is to provide an incentive for any firms that may want to know what is there in case something is found, to buy in early, and to develop a consortium. It will be very costly later on.

Mr. HUGHES. Secretary Ross, I think that what you say is accurate, but I do not consider the disincentives that you have built in very major disincentives.

As I understand your regulations, if you have 20 companies participating in a \$10 million stratigraphic test, and they whack it up, it amounts to some \$500,000 per firm, which is not a great deal of money to them; and yet if, a significant find is made and some company determines that it would be wise after the fact to buy in, they can buy in under those circumstances for \$1 million. That is not much of a disincentive. I do not see that as much of a penalty.

What I am saying to you is if we are trying to encourage industry to try onstructure stratigraphic drilling, then we have to provide some incentives, some assurance, that their work product is protected! I would hope the Department of the Interior reviews that regulation, because I think it is self-defeating.

Ms. ROSS. We hope through onstructure drilling to get competition. We hope to provide information for bidders. This disclosure would not be everything that is in the well. It would simply be the statement, as we do presently on our COST wells, that a hydrocarbon show has occurred; that will allow other people, if they wish, to pay the price to buy in and become more competitive in that sale.

If we can provide them the information so that we can have the broadest possible competition and not get into the problem where everyone waits for that point; if we can insure that someone is going to form a consortium to start—and that is why we set up the financial penalties that we have—then we will have both worlds, the well and wide distribution to encourage bidding.

Mr. HUGHES. I understand what you are saying and I suppose it is mostly a value call. I just think that you will still have the competition we seek, and I am very supportive of onstructure stratigraphic drilling. I hope that it does provide additional information and help expedite as best we can the identification of areas that might contain hydrocarbons.

But I question whether or not we are going to get the type of enthusiasm that we should be looking for if we do not provide some protection to those companies that do participate in a group test such as we are trying to encourage. I do not think that you have the built-in incentives that you think you have.

I do not think \$1 million to a major oil company is very much when you consider that almost half of it could be written off anyway.

So when you consider the tax consequences, you are not talking about a great deal of money, and if there is a public announcement of a significant find, it would seem to that any major oil company that does not show great interest in participating after the fact, is missing the boat. I do not think that you are going to provide the incentives that we hope we can provide in seeking onstructure stratigraphic permits.

Ms. Ross. We appreciate that concern and will take that into very serious consideration in the final regulations that we prepare because we do want to see onstructure drilling.

As you know, we have that relationship now where a show is made public and people do drill. Now, if it is not going to carry over to onstructure drilling, we will remedy that.

Mr. HUGHES. Just one more question, Mr. Chairman. I know I am over my time.

The CHAIRMAN. The gentleman can take his time. It is a subject that we want to cover as completely as possible.

Mr. HUGHES. Thank you, Mr. Chairman.

I have written to the Department of the Interior on that issue and I hope you will give my concerns some consideration.

Ms. Ross. We will.

Mr. HUGHES. With regard to lease sale 49, the sale that took place just a couple of weeks ago, what is the present status of the review of those bids, they came in, as I understand it at about \$41 million?

Ms. Ross. Yes. The sum of the high bid was a little over \$41 million. As provided for by these amendments that we are discussing, that material has been forwarded to the Justice Department. They are reviewing the competitive aspects of that sale.

Mr. HUGHES. I realize that the Department of the Interior is reviewing those bids. Let me just express my own views as one member of this committee who also believes as strongly as anyone that we have to get on with the business of exploring for oil and gas in all areas and inventory as best we can what resources exist domestically.

I think that lease sale 49 demonstrates one of the major flaws in our leasing policy; that particular sale, in my judgment, was premature. I so advised your department in months past that it was premature; the industry did not have the ability to digest the

information that was secured, from lease sale No. 40, and I think it indicates that the bidding was highly speculative.

I do not think it is in the public interest that the Department of the Interior accept any of those bids. I would hope that my concerns are given every consideration, and I know I speak for other members of the committee who feel that \$41 million almost amounts to a dribble. It was an unintended indictment of our present leasing policies.

Thank you, Mr. Chairman.

The CHAIRMAN. Mr. Forsythe?

Mr. FORSYTHE. Mr. Chairman, I will yield at this point to Mr. Young, who has to leave.

The CHAIRMAN. Mr. Young?

Mr. YOUNG. Thank you, Mr. Chairman.

The Department is currently considering a joint sale and lease sale in Beaufort Sea. It is my understanding that there are a good number of procedural steps that must be taken before this sale is accomplished.

Would you explain the status of the lease sale and what needs to be done before the sale and what are the problems that you are faced with?

Ms. Ross. Yes.

Congressman, that sale is tentatively scheduled for December of this year. It is a unique endeavor on our part to work with the State to offer these leases in a joint sale.

What I would like to do is call on Carolita Kallaur, who is with me today, who can provide you with a few facts on where that stands. She works in the office of OCS program coordination, and is handling that sale for us.

Ms. KALLAUR. The draft environmental impact study will be published later this month, in March. We will be holding hearings in either late May or early July. We are working out arrangements with the State of Alaska and want to make sure that the Alaskan natives are able to attend hearings and that will determine whether the hearings are held in either May or June.

The Justice Department has received requests from the Department of the Interior to initiate litigation and this litigation needs to be initiated for the sale to go ahead, since the lands are in dispute.

Mr. YOUNG. Point of clarification: In dispute with whom? I thought it was found that the State does in fact own those lands.

Ms. KALLAUR. No. That is not quite correct, sir. There is a portion of the sale that is in dispute between the State and the Federal Government and that is why we are proceeding with the joint sale under section 7 of the OCS Lands Act.

Mr. YOUNG. Right.

Go ahead.

Ms. KALLAUR. There are weekly meetings in Alaska between State personnel and Department of the Interior personnel to discuss various procedural matters, and the Washington office of Interior is in close contact with the field offices and they have so far not identified any problems that cannot be resolved in the time frame that we have in the August 1977 schedule.

Mr. YOUNG. There are not going to be any delays?

Ms. KALLAUR. Not that we know at this time. It is a very environmentally sensitive area and there is a great deal of concern because of the bowhead whale and some conflict with the North Slope Borough, but we believe it can be resolved by December.

Mr. YOUNG. Is there any difference of opinion between the administration and between your department, the Interior Department?

Ms. KALLAUR. I do not believe so, sir. We have received very strong statements of support for the sale.

Mr. YOUNG. I am talking about within the administration.

Ms. KALLAUR. No. Secretary Andrus is very much behind the sale, and he and Governor Hammond have discussed it on several occasions, and we all want to make sure that it can be held on schedule.

Mr. YOUNG. Mr. Chairman, I hope that we keep track of this. I am not terribly enthused about the Beaufort Sea sale. I will tell you that now. I happen to believe that we ought to have an on-shore sale, pet 4, next door, in the State of Alaska. If there are any delays, I hope, Ms. Ross, that you or yourself, young lady, will inform this committee that the delays are internal, that they are between different branches of administration because I am looking at those very closely.

Ms. KALLAUR. We know of no such delay and will advise you if any arise.

Mr. YOUNG. Mr. Chairman, I am just curious—at that table, everyone sitting there, have any of you been involved in the oil industry previously or in any aspect within the department of the oil industry?

Dr. KASH. Mr. Rhodes was with the oil industry prior to coming to USGS.

Mr. RHODES. I have been with the USGS for over 20 years.

Mr. YOUNG. I am not being mean, Mr. Chairman. I am just curious since we are dealing with a ticklish situation. We passed the law and while I do not question their ability at all, I am just wondering if we have people involved in this crucial matter that might be nonobjective. I am hopeful that they at least have some insight into the problems that we are going to be facing in the development of offshore leases.

The CHAIRMAN. I might say that some of the people in the Lower 48 might want to expedite that.

Mr. YOUNG. I agree, Mr. Chairman.

But we have lots of oil on land rather than offshore, which is easier to control. I just say let us have our cake and frosting too.

The CHAIRMAN. We would like to trade you one of our operas in New York for some of your oil.

Mr. YOUNG. If the administration has its way, we would get a better deal out of it, because you cannot get the oil out of the State.

The CHAIRMAN. Mr. Forsythe?

Mr. FORSYTHE. Thank you, Mr. Chairman.

Secretary Ross, you have already discussed with my colleague, Mr. Hughes, the due diligence question and I would like to pose another question in that area.

One of the burning issues in the entire consideration of the 1978 amendments, was the question of delays and speeding up OCS energy production.

In a recent article in the Wall Street Journal, I was pleased to read that Secretary Andrus was going to apply due diligence requirements on all leases.

Could you inform this committee on what would be considered in regulations on due diligence? When will the regulations be ready for comment and, since they are the responsibility of the Department of Energy, what type of communications have you had with the Department of Energy on this subject?

Ms. Ross. Yes, Mr. Forsythe. I saved the article that you were referring to about the Secretary's remarks on diligence.

We do not have regulations governing diligence. We have a requirement that people explore and proceed toward development expeditiously; that is what the Secretary is enforcing carefully and will continue to enforce carefully. It is being done on a basis of moving the leases along as quickly as possible, receiving plans and making judgments on that basis.

Mr. FORSYTHE. Strictly based on the statute rather than any further definition by regulations is what you are telling me?

Ms. Ross. I believe that is right. We do have lease materials that govern it.

Is that correct? It is the lease material that governs, Mr. Truesdell?

Mr. TRUESDELL. Yes.

Mr. FORSYTHE. All that is within the purview to spell out in the lease—could somebody comment on what is the pattern in the leases that you are now dealing with?

Ms. Ross. The pattern?

Mr. FORSYTHE. Of what you are spelling out in the leases in defining "due diligence"? You say "due diligence." This obviously, I think, can be a broad range of mandates that there be a rig on site in 90 days; there be XY and Z and so on. You say just "due diligence," and have no definition? It seems to me to leave it wide open to all kinds of problems that one lease is going to be requiring one set of due diligence, another lease something else, unless there is something that sets a pattern.

Ms. Ross. There needs to be a consistent policy. We have not tried to specify timing in which something as problematic as OCS exploration will occur. What we have done is set an end-date time—at the end of 5 years, progress has to have been made satisfactorily.

What we have done in the regulations that came out, that I mentioned earlier, we have put in a provision which is new, proposed for comment, that exploration plans for the OCS leases be filed by the end of 2 years; that would be a new provision and, if adopted, that would require lessees to tell us their plans earlier in the lease term.

Mr. FORSYTHE. So that the exploration plans for that lease must be filed within 2 years of the awarding of the lease?

Ms. Ross. When these regulations become final.

Mr. FORSYTHE. If they actually become final.

Ms. Ross. Yes

Mr. FORSYTHE. And then beyond that it would mean purely an assessment at the end of the lease, the 5-year period, as to whether the work following the filing of the plan had been adequate?

Ms. Ross. Had kept to the plan as had been prepared and approved, yes.

Mr. FORSYTHE. That the plan is required to have a time schedule beyond the actual proposals, they are going to be so many wells and so many platforms and whatever that are involved in planning. It would go into a time schedule that is required in the plan.

Ms. Ross. A development and production plan would have that, yes.

Mr. FORSYTHE. Again, have you consulted with the Department of Energy in these matters dealing with due diligence?

Ms. Ross. They have an authority under their Organization Act to write regulations for diligent development.

Mr. FORSYTHE. Then it will be between two different agencies and maybe having two different kinds of standards here.

Ms. Ross. If regulations are written, they will be written by the Department of Energy and, of course, we would operate within them.

Mr. FORSYTHE. How will that affect the leases that you will have in the interim? Will there be an affect on those leases that may be made in the interim?

Ms. Ross. Regulations when promulgated would apply to existing leases.

Mr. FORSYTHE. Therefore it could change the basis of the lease?

Ms. Ross. That is true of all regulations; yes. They apply to existing leases in almost every case.

Mr. FORSYTHE. Thank you.

I would like to again talk a little bit more about the Baltimore Canyon.

I do also represent a bit of the coastline of New Jersey and, of course, Baltimore Canyon is of some interest to me also.

Secretary Andrus explained that the lease was a disappointment and was due to the fact that sliding-scale royalties were used; is that correct?

Ms. Ross. He pointed out that in that sale we had, on a portion of the tracts, a little over half of the tracts, used an alternative bidding system as had been provided in the actual requirements of the statute of this committee, and in fact 24 of the 44 tracts that were bid on were sliding-scale royalty tracts.

Mr. FORSYTHE. There was a difference in the bids of those tracts versus the nonsliding-scale tracts?

Ms. Ross. There was approximately the same set of high bids on the two tracts but there was a slight increase in the average number of bids on the sliding-scale tracts.

Mr. FORSYTHE. A higher number of bids on the sliding scale than on the front end?

Ms. Ross. Yes, on average.

Mr. FORSYTHE. It is my understanding that—my own information, having followed this rather closely for a number of years now that the Canyon was not ever considered really a high source of hydrocarbon until the inquiries began. We now hear that there

may be a potential of high degrees of hydrocarbon, but they appear to be located where they were not expected.

Is this a correct assessment at this point in time?

Ms. Ross. I am not sure I heard you. You are still speaking of the Baltimore Canyon?

Mr. FORSYTHE. Yes.

Ms. Ross. There is some evidence that the resources may be located farther seaward on the Continental Slope. Perhaps the Geological Survey could speak to that further, but I believe that is correct.

Dr. KASH. Yes. There is indication similar to what Ms. Ross indicates. Once again, I would emphasize that prior to drilling, which leads to discovery, this remains a process that has a great deal of uncertainty and I think it is a mistake to push the argument in either direction very far until we have had an opportunity to test the drilling.

The CHAIRMAN. Would the gentleman yield at that point?

Did not Mr. Oxley of Tenneco indicate that the most promising areas, in his opinion, were at about 3,000 feet.

Dr. KASH. I do not recall reading that statement. But there is a good deal of opinion within the community that the promising areas are in deeper waters.

The CHAIRMAN. And the question of the ability to drill in those deeper waters; the industry does have the technology to do that?

Dr. KASH. Yes, exploratory drilling is no problem at all.

The CHAIRMAN. Thank you.

Mr. FORSYTHE. Well, you are telling us again, which I think is really one of the bottom-line assets of this whole operation of the OCS, that optimism really is a slippery status until actually there is exploration that produces a commercial discovery; that the only way we do that is to lease and drill.

Dr. KASH. Yes, sir.

Mr. FORSYTHE. And really that while onstructure drilling, Geological Survey, all the other things may be a test in terms of interest; that is about as far as all of that can go.

Dr. KASH. Yes.

Now, once again, one needs to emphasize that the odds get better as we acquire more detail, more complete information; but you kind of cross the rubicon when you drill a well and find producible oil; things change pretty rationally. They go from orders of magnitude to estimates to factors, I guess.

Mr. FORSYTHE. Another question.

Do you feel the fact that 20-odd blocks, I believe maybe 24 blocks in the area of the COST well be removed from the sale, had a deflating effect on the sale, the Baltimore Canyon?

Ms. Ross. I am not sure—had an inflating—

Mr. FORSYTHE. Deflating effect.

Ms. Ross. Deflating.

If what you are saying turns out to be true about the possibility of hydrocarbons, they might be promising tracts. The problem is with the flow of sediment that the Survey found in their geophysical testing. In their opinion, the tracts would not be suitable for the placement of structures, nor was there a place nearby where you could tap those. So that their advice at that time was that, as

promising as they might be and that is conjecture until we get there—that is not suitable for offering at this time.

Mr. FORSYTHE. The oil companies who were interested, did they agree with this assessment of the situation, that it should not be leased at this time in that area?

Ms. Ross. I have not had a direct discussion myself with anyone in the industry on that topic. I do not know whether anyone in the Survey has or not.

Dr. KASH. We of course have discussions in this area and a variety of forums. Our people are involved in professional conferences. I think it is fair to say that there is a general consensus that exists among professionals in this area as to where one can safely, given the state of technology, place platforms. We need to approach that very cautiously.

To the best of my knowledge, there is no great difference of opinion on that.

Ms. Ross. Mr. Forsythe, Don Truesdell points out to me that, as you may know, we have received several letters of protest from the industry about deleting the tracts and I think we are very sympathetic to that. An investment was made in the COST well, information was developed that would have been useful for evaluating and bidding on those tracts; and we would like to offer them; and in the future, when we have sales and COST wells or on-structure wells, we will do everything that we can to offer the acreage that we have evaluated unless we see a reason why we cannot; and in this case, we felt that we saw a reason.

Mr. FORSYTHE. Is that a final situation as far as the tracts that are withdrawn; that if it does not look proper, to try further exploration in that area?

Ms. Ross. That is not for any indefinite future, but for this sale decision.

Mr. FORSYTHE. There will be continuing studies as to what the situation might be under new—I guess new information?

Ms. Ross. We will certainly be trying to, as we are for a number of other conditions on the OCS, to put ourselves in a position where we can——

Mr. TRUESDELL. Sir, we had the same situation at the mouth of the Mississippi River 5 or 6 years ago with tracts, based on a situation not entirely analogous to this, but there was some similarity; based on the technical review that was done, plus geological studies, we have offered for lease most of those tracts 5 or 6 years ago. We hope that this could be done here.

Mr. FORSYTHE. Mr. Chairman, I think I will pass for another round.

The CHAIRMAN. Mr. O'Brien.

Mr. O'BRIEN. Ms. Ross, do you think that recent international events necessitate a re-evaluation of OCS development?

Ms. Ross. The operating concept of the OCS program now is to move as quickly as we can into this area. We need to do a fairly extensive planning process, again largely mandated by the amendments that we are discussing today, to get there, but that has always been the principle behind the August 1977 schedule. That remains the department's purpose; and so, yes, we need to move as quickly as we can and we are making an effort to do that.

Acceleration in the sense of collapsing some of those milestones would be very difficult for us to achieve given the way that they are set out in statute now.

Mr. O'BRIEN. In that regard, how many lease sales per year does the 5-year leasing program that you have under development call for?

Ms. Ross. We have presented a number of options to the Secretary and we are at the final stages of his decision. We expect approval from him very shortly, but that has not occurred yet; so I cannot describe to you what that proposal will contain.

We are analyzing a range of options that go from six sales a year, which is what we determined we could achieve administratively, given the resources that we have now, to a somewhat lesser pace, in order to be a little more cautious about Alaska and certain other environmentally sensitive areas.

So we are operating within that range.

The CHAIRMAN. Mr. Emery?

Mr. EMERY. Thank you very much, Mr. Chairman.

I do have an opening statement which I will submit for the record and spare us all the pain of listening to it.

The CHAIRMAN. Without objection, your statement will be inserted into the record at this point.

[The following was received for the record:]

STATEMENT BY HON. DAVID F. EMERY, A REPRESENTATIVE IN CONGRESS FROM THE
STATE OF MAINE

Mr. Chairman, I very much appreciate the courtesies extended to me today so that I may participate in this hearing to investigate the status of oil and gas development on the Outer Continental Shelf.

As you may suspect, my past interests in alternative energy sources, as well as my personal experience of living in Maine, a state whose energy consumption and energy needs are extremely high, have led me to study the current status of offshore oil and gas development in this country. The results of my investigation relative to U.S. oil reserves and offshore energy production brought home to me the absolute necessity of exploring and developing our own outer continental shelf.

According to the Department of Energy, the United States currently has only 4.6 percent of all known world fuel reserves. It is estimated that this approximates only 10.3 years of proven crude oil reserves. By contrast, however, U.S. offshore oil production to meet future petroleum demands represents only 10.3 percent of the total world offshore oil production, which by itself is only 19 percent of total world oil production. It is evident to me that U.S. demand will soon outpace available supply, unless we employ our resources in the direction of offshore energy development.

Consider also the U.S.'s dependence on OPEC oil. We currently buy 70.3 percent of our total petroleum imports from OPEC nations. Given the recent events in Iran, we can safely assume that our dependence on OPEC could substantially increase. This increased reliance, however, places us at the mercy of the seller, witnessed by Venezuela's recent 15 percent price hike on industrial fuel oil.

Our advanced technological and industrial society has made us a leader among world nations. It has made us one of the wealthiest, healthiest, and most stable societies ever known. In order for this situation to remain, however, it is obvious to me that we must meet the demands made by our highly industrial economy by exploring and developing our resources in a sound and prudent manner.

We passed the Outer Continental Shelf Lands Act Amendments last Congress. Let us now give this law a chance to work by encouraging offshore energy development according to the demands of our environment and according to the real energy demands of our society. I feel that delay must stop. Instead, we must meet the challenge of current energy needs by exploring our own resources as far as possible.

Thank you Mr. Chairman. I look forward to working with members of this Ad Hoc Subcommittee to encourage the development of our offshore energy resources in the months ahead.

Mr. EMERY. Thank you very much.

I am sort of here wearing two hats today, one as an official member of this committee, and my status is going to be in limbo until we determine the structural and jurisdictional problems that have delayed the ultimate extension of this committee this year and what form they will ultimately take.

My second hat is chairman of the Republican Energy Task Force, which will deal with a variety of energy-related issues, including this one, which certainly is exceptionally important; and I would make a very quick observation that with the difficulties in Iran and with the ultimate increase in the cost of imported petroleum and with the tremendous dependence in this country on oil and gas, I think it is essential that we proceed with all deliberate speed to develop an Outer Continental Shelf oil and gas leasing policy that will allow us to utilize those energy resources as quickly as possible. Naturally with all the safety and energy mental guidelines that are necessary to guarantee to do the job properly and well.

With that statement, I would like to proceed with some questions that relate to this general line of questioning that we have had this morning.

During the oversight hearings held in December, Congressman Mineta of California raised questions about lease sale 53. He stated that although the Department of the Interior regulatory guidelines were a criteria to be used, that it, impact leasing regulations, equitable area of risk in leasing, competing uses of the water and coastline, interest in oil and gas developers, State laws and resource goals, environmental sensitivity to the area, and also availability of information predictive of probable environmental impact, these are not being given equal weight by BLM.

Now, we again have this question being raised as it pertains to lease sale 48 in California. I am curious, since the oil needs of California are currently being met in ample supply that criteria are being given consideration, and since needs in the East and Midwest are a great deal greater at this point, why is not more attention being given to additional and increased leasing activities in the Atlantic; and, secondly, how will the various criteria be weighted in reaching a decision on what areas are going to be offered for lease?

In other words, really, how do you set your priorities?

Ms. Ross. Shall I speak about the present schedule, which is the one on which sale 53 appears?

Mr. EMERY. If you would

Ms. Ross. The basis for setting this schedule had a number of considerations as to timing between sales. There are generally 3 years between sales, so that we have sales in the North, South, and mid-Atlantic coming along regularly at 3-year intervals, and that has been considered again for the 5-year program, along with a possible acceleration of that.

We are interested in leasing in California because it is a proven oil and gas area.

The sale 53 that you discussed we are in the midst now of a very extensive consultation and environmental evaluation process that will get us to a sale in February of 1981, according to this schedule,

after very extensive discussions with people in that State. I am not sure if I am being responsive exactly to your question.

Mr. EMERY. Well, the intent of my question is basically to determine why things seem to be going more slowly generally on the east coast than on the west coast, when our greatest supply or oil supply difficulty happens to be on the east coast.

We have had problems with transportation of oil from West to East, to get the clearances to transport oil from Alaska to the lower 48 and really the biggest supply problem that we have seems to be on the east coast or at least those of us who live on the east coast, especially New England, feel that way; so the intent of my question is to see what attitude the agencies have, and you have, toward moving east coast development along more rapidly so that we can get the resource.

Ms. Ross. Let me speak to the schedule, then, which you may have a copy of.

There is a North Atlantic sale that was scheduled for January of 1978. We hope to have that sale this year, now that the first circuit has lifted the injunction, as the chairman mentioned.

We had a sale in the South Atlantic later on in 1978. We then had a mid-Atlantic sale, which we have just held. Then the first southern California sale comes up, which is due in June.

We go along—we had a scheduled Blake plateau sale, which turned out not to be an appropriate area for lease; that was in the South Atlantic.

But as we go along, we have another North Atlantic sale which is scheduled for late 1980 and we have another South Atlantic sale that is scheduled for 1981 and a mid-Atlantic sale directly after that.

So that as it turns out we have five east coast sales on the schedule and two California sales. So we are being ambitious on the east coast.

Mr. EMERY. What problems do you foresee with delays in east coast leasing? We have had problems in the past with delays and more delays, court cases, unforeseen difficulties, and just a series of things which have stretched out the leasing prospects over a period of time.

Are you facing legal challenges from environmental groups—are you facing technical problems; are you finding difficulty with the drilling interests? Why have we had delays on the east coast in the past, and do you anticipate the schedule that you have just given us will hold true or do you anticipate that there will be more delays that you possibly might predict?

Ms. Ross. I think we see some good points and some bad points. We have kept to everything on this schedule except in New England and that was the result of litigation.

When the amendments were passed, the discussion was that there are times set out, planned for consultation, so that we will not find ourselves with people having to go to court to resolve their concerns about the sale.

What has happened is that in the South Atlantic, we were able to have that sale, on schedule, in March of 1978. Similarly, in the mid-Atlantic, we had that sale on schedule, in February of 1979.

In both instances, we were able to work with the State, with other parties, and proceed; both of those sales are the first frontier sales to have occurred without legal challenge. We are optimistic that that is a record that we can continue.

The North Atlantic is a different situation. We hope to resolve that. We have been disappointed. We did the same consultations; it did not work out the same way. We will try again. We hope to bring it off.

Mr. EMERY. Getting back to another part of the question that I originally had asked, I have listed eight different standards or criteria for determining priority for lease sales.

Could you comment on why these different criteria are not being given equal weight by BLM?

Can you comment on the importance of each one of those categories and maybe you disagree with the contention that they are not being given equal weight; but how do you use standards, what terms, what do you think is most important in determining lease priorities?

Ms. Ross. I think that the philosophy that we are following is the one that I mentioned before; if we can figure out a way to responsibly get oil and gas resources, we will try to do it, so that the driving force is where do we think the oil and gas is. Then we have to consider all these other important considerations, then we can go from there.

The question that you asked about BLM's procedures, I would ask Mr. Truesdell to respond to.

Mr. TRUESDELL. It is very difficult to weigh the eight items that you listed. How do you weigh the esthetic problem that would result from shoreline people objecting to seeing rigs in their view? It is difficult to weigh this.

It is difficult to weigh perhaps long-term biological impact, very difficult. If it is a short-term situation, it can be weighted in dollars.

I think I would have to say that weights are different at different times. The stage we are in with the central and northern California program right now is, we are doing an intensive environmental analysis in the preparation of an impact statement.

At the end of this, weighting will be different than what the weightings that were made when we originally selected the tracts were.

As Ms. Ross says, the initial weighing is for hydrocarbon potential. We look at other weightings as we go along.

The Secretary then has the final weighing and this is a difficult decision.

Mr. EMERY. Just one final question—and I thank the chairman for his patience with the time.

In the North Atlantic, and I expect, from a number of other people from around the country where there is a traditional fishing industry, I know many of my fishermen—and I have 17,000 in my district—express a continuing concern over the impact of drilling operations on the George's Bank or drilling operations anywhere else on the Outer Continental Shelf east of New England.

Always in the back of my mind and in the minds of constituents is the ultimate conflict that may occur between people who drill for

oil and people who catch fish; and I wonder if you could comment on some of the standards that you might apply to that concern, and whether or not you have had any difficulty in that area in determining lease sites?

Ms. Ross. We understand that concern. I think that the record of the program in other fishery areas, like the Gulf of Mexico, has been a good one, but that is not the North Atlantic.

The people there are facing something new and unknown and we have to work with them to try to make it clear what it is we are going to do and what the effects on them will be.

I understand that we will have to be cautious and work closely with people to discuss with them some things that could be threatening. We have done a number of things.

This committee has established a fisherman's gear fund; we have a requirement, which we are putting in the regulations, for the marking of equipment on oil and gas activities so that in combination, if there were to be a conflict with fishermen, a fisherman would be able to determine who is at fault through the marking of equipment or, failing that, go to the fund for compensation.

We are working on a renewal of the George's Bank sale there, which I expect would have the kind of stipulations that we had before. There were some special stipulations there, for training of oil and gas crews in fishery practices; we have requirements of shunting, biological stipulations, that will require special care to protect the fish population. We have the authority on placement of structures and drill ships, for example, to try to keep the conflict with fishing down and keep the number of obstructions in the area to a minimum.

As Don, again, points out, the Secretary of the Interior withdrew in his final notice of sale, a number of tracts explicitly on the recommendations of the people of Massachusetts for the fishery conflict that they were concerned with. So we feel we have an ability to work in the Gulf of Mexico, and we hope to proceed with the same kind of success in the North Atlantic; but we realize that we have to bring people along; it is a new activity there.

Mr. EMERY. As long as the powers that be are mindful of the concerns and aware that there are two aspects; one of which is the possible destruction of fishermen's gear.

The other aspect is not to disrupt the breeding grounds and traditional migratory habitat of the great species in that area.

I want to thank you very much for your direct responses to my questions.

Thank you.

Mr. HUGHES [presiding]. Mr. Studds?

Mr. STUDDS. Thank you, Mr. Chairman.

I do not know how to address you, lady and gentleman, or people.

I want to say one thing in general first, precisely because I am going to ask a couple of questions that will indicate my rather strong unhappiness with recent developments.

Generally, I think this Department of the Interior, under the new Secretary, has done an absolutely superb job, both generally with respect to your overall responsibilities and particularly with your administration of the Outer Continental Shelf program. I believe there has been superb cooperation, at least from the

moment that Secretary Andrus and his folks came in. I think you have been uniquely sensitive to the frontier areas that I represent and with the concerns of Mr. Emery, as you well know, which are enormous. I think you have done that very, very well.

I have been telling my own constituency for over 2 years that the department is in good hands, since my years in Washington, and the hands of people who understand its basic mission, which is as a steward of the public resources and they have done it fairly. That is the subsequent context in which my anger will be expressed and I want to make it clear.

Ms. ROSS. We will await your further remarks.

Mr. HUGHES. Will the gentleman yield for just a moment?

Mr. STUDDS. Yes, Mr. Chairman.

Mr. HUGHES. I just observe that the gentleman from Massachusetts is mellowing and taking a little longer to get to the "but."

Mr. STUDDS. I will get to it. Mellowing does come with age, Mr. Chairman. You know what else comes with age in this institution.

On January 22, I wrote a letter to Mr. Gregg. Have any of the—did any of the four of you see that letter, or the response that I got back from someone else?

Mr. TRUESDELL. Yes. I wrote it.

Mr. STUDDS. Aha.

The other three of you are excused.

I wrote a letter on January 22, asking for two things.

First of all, I pointed out that, given the delay way off schedule of sale 42, that it might make sense to delay the initial call for comments on lease sale 52 until we learned something from 42, which has been sidetracked, as you well know, by its fate in the court system.

It seemed to me only logical to ask for new nominations when we had some new information, which we would have had had you been able to proceed under your original schedule for 42, and presumably it is one of the reasons for the 2-year space which I understand you to say is between sales, which is to enable us to learn from experience, to know the second time from nominations more than we did the first time. I made that suggestion, that we wait until we learn something about oil and gas and how fishing and the industry, the oil industry, could coexist.

Second, and I must say to you in all candor, I was not particularly optimistic about the response that I would get. I did anticipate it coming in the English language, but that is rather minor. I really did not anticipate an overwhelmingly positive response to that but, quite frankly, I did anticipate a positive response to my second request, which was that the department not solicit industry or public comment on tracts closer than 50 miles to shore.

We had received some assurances with respect to the first lease sale. I was stunned, quite frankly, by the refusal or failure of the department to give us such assurances with respect to lease sale 52. May I say to you I was stunned on the face of it, not only for the substance but more particularly what I consider political ineptitude of the first order. I do not believe that you or I or anyone thinks that the oil industry believes that anything is going to be leased within 50 miles of shore.

Do you agree with that?

Mr. TRUESDELL. The geological evidence that we have, shorewide of 50 miles, is very, very low in hydrocarbon potential.

Mr. STUDDS. Did you get any comments from industry expressing interest in that area?

Mr. TRUESDELL. I have not looked at them, sir. They just closed this last week and we have not reviewed them as yet.

Mr. STUDDS. But generally you agree with me that it is highly unlikely that there will be high interest within 50 miles?

Mr. TRUESDELL. Yes.

Mr. STUDDS. Why unnecessarily cause the public alarm and concern that you caused by requesting comment on those tracts and by refusing a request not to do so?

Let me read to you from the letter which I gather you wrote. It was signed by someone else, I do not know, an acting associate director.

But you say:

The purpose for the call for nominations and comments is not only for obtaining industry nominations but also for soliciting comments from other interests. It was primarily to receive such other comments that the area of the call for sale 52 included tracts as close as 3 miles from shore.

Now, what in the world are you trying to tell us? You want to go back and reassure us that no one up there wants to lease within 50 miles? What other interests?

Mr. TRUESDELL. That would mean interests that would not want leasing; that would have uses in the area. A fishing—

Mr. STUDDS. You mean you do not know the answer to that question?

Mr. TRUESDELL. We want any new information that has developed over 3 years.

Mr. STUDDS. Do you want to be reassured that the fishermen do not want you to lease there?

Mr. TRUESDELL. It is not a question of leasing there. It is a question of driving boats or air traffic—

Mr. STUDDS. That is not what we asked for comments on. You had whole tracts and you wanted to know whether the people were interested in drilling or not drilling there.

Mr. TRUESDELL. I think we tried to make it broader. If you read the call for nominations, it said on a tract-by-tract basis if possible; we want general information concerning leasing in the area and this would be other uses. What they would not want, for example, ship traffic.

Mr. STUDDS. May I suggest to you, sir, if you are going to lease outside of 50 miles, it is highly likely you are going to have traffic within 50 miles getting there.

Mr. TRUESDELL. But this can be regulated.

Mr. STUDDS. Are you trying to tell me that when you call for comments on these tracts, you did not want comments with regard to whether or not there ought to be drilling there?

Mr. TRUESDELL. No. That was one of them.

Mr. STUDDS. All right.

So why do you not give us the assurance that you are not going to do that?

Ms. Ross. May I respond to that?

Mr. STUDDS. I wish somebody would.

Ms. Ross. One of the principles—I hate to use that word a lot, but they tend to guide us—they come from the administration and the Secretary that govern the schedules that we are under now—is that all areas will contribute to oil and gas in an equitable manner.

Mr. STUDDS. What do you mean, the whole geographic area of the country?

Ms. Ross. Yes.

Mr. STUDDS. Nobody is talking about that.

Ms. Ross. In some areas, for example, in Alaska and, in fact, in almost all areas but the Atlantic, we have leases that go right up to 3 miles. They are carrying that risk. It is a greater risk if something should happen of some harm to them.

It is true that—my knowledge is in line with Don's, and I think the Survey would agree—that the hydrocarbon potential there is low but you have something on the record that indicates why we are making the decisions that we are making I think is very useful.

It is an effort to indicate why we are doing what we are doing. We have questions about the Iranian crisis; we have questions about why, how can we accelerate; can we do more; and our answer in this area will be, we do not propose to lease that, I suspect based on both the hydrocarbon potential and the use.

So now we have that, like in other areas, that we want to make sure that we have the public input that we need.

Mr. STUDDS. You are running the risk of equalling the political insensitivity of the industry itself.

With all due respect, it seems that—like you do not have a clue to what public opinion is and I cannot imagine, unless you have had your windows closed and phone off the hook, that you do not know what is going on. Some of us have tried to wage a battle up there to persuade people that it is possible to conduct offshore drilling responsibly and in a way that minimizes the risk to the fishing industry, which is infinitely more important to that region and this country for anybody who can see beyond their nose, for centuries, for what little gas and oil that we find in George's Bank.

In this instance, we have seen little understanding of that in the administration.

Given the fact that both of you admit that it is highly unlikely that we are going to lease in that area anyway, because there is not any oil and gas, what kind of political ineptitude leads you to do things that will provoke the anger that you see in me and the people that I represent? It is just plain dumb and it is unnecessary trouble.

We are going to have enough trouble up there as it is, given Murphy's law—not the chairman—about things going wrong when they can, and there is no need on this Earth for us to be creating problems unnecessarily for ourselves. I look at your faces without much hope, but I will renew my plea to make this one of the problems that you do not face up there.

I have a little more difficulty defending Secretary Andrus and this administration on this subject and a lot of what I have said about the sensitivity of the new administration now does not sound quite so convincing as it did up until last week when I reached this wonderfully—with all due respect to you, Mr. Truesdell—perhaps you can translate a sentence in here for me; you wrote it.

You say, "As you know, even if tracts are included in the environmental studies, it does not necessarily mean that the tracts will be offered for sale." This is the sentence that I would like you to put into English, if you can. "The Secretary's deletion of the number of tracts in sale 42 offers a pertinent example of refinements in decision."

What does that mean?

Mr. TRUESDELL. The last sentence or the first?

Mr. STUDDS. The last.

I am going to submit that to the "Mumbletypeg" this month, I think.

Mr. TRUESDELL. That was intended to show that the process of evaluating tracts for eventual offering for lease is long and extended and it results in several decision points and the final one that the Secretary makes when he decides to offer it to the market for sale, and the last sale 42, a number of facts—in fact, most of the near-shore tracts which some were very close to 50 miles offshore, were removed by the Secretary at the last stage.

Mr. STUDDS. I understand that.

Mr. TRUESDELL. This is what we are trying to say.

Mr. STUDDS. Let me ask you this. Perhaps you can respond positively to this.

Would you undertake an examination of the industry's interests and would you inform us and the public as soon as possible that there is no interest in areas 50 miles offshore and, if that is the case, that no one wants to lease the darned thing; that you get rid of this darned problem?

Mr. TRUESDELL. Yes. That could be—that will be done very quickly. This is what we do in our normal course of business with the adjoining States; and we will provide you with the same analysis.

Mr. STUDDS. Can you do that prior to the formal tract selection?

Mr. TRUESDELL. Yes, sir.

[The information follows:]

COMPANIES NOMINATING IN SALE NO. 52

1. Murphy Oil Corporation.
2. Exxon Comapny U.S.A.
3. Chevron U.S.A. Inc.
4. Mobil Exploration and Producing Services Inc.
5. Houston Oil and Minerals Corporation.
6. Tenneco Oil Company.

SUMMARY OF INDUSTRY NOMINATIONS

Nominated:

Total 594 tracts, comprising 3,381,750 acres (approximately).

High (4-6 nominations), 30 tracts, comprising 172,800 acres (approximately).

Medium (3 nominations), 41 tracts, comprising 236,160 acres (approximately).

Low (1-2 nominations), 523 tracts, comprising 2,972,790 acres (approximately).

Number of tracts nominated within 50 miles, 68 tracts (all low interest nominations).

Closest tracts to share, 25 miles.

APPROXIMATE GEOGRAPHICAL STATISTICS (CALL AREA)

Distances from share, 3-160 miles.

Water Depths, 19-1,250 feet.

Number of tracts in call, 3,028

Total acres in call, 17,249,252 acres.

SALE 42 NOMINATION—SUMMARY

19 companies nominated—nominated acreage:

Total, 1,927 tracts, 10,100,000 acres (approximately).
 High (9-12 nomination), 153 track, 871,000 acres (approximately).
 Medium (6-8 nominations), 259 tracts, 1,300,000 acres (approximately).
 Low (3-5 nominations), 603 tracts, 3,400,000 acres (approximately).
 Very low (1-2 nominations), 914 tracts, 5,100,000 acres (approximately).

NEGATIVE COMMENTS AND NOMINATIONS RECEIVED FOR SALE NO. 52

1. Representative Gerry Studds—Congressman from Massachusetts.
2. Virginia R. Younger.
3. Sierra Club.
4. Conservation Law Foundation.
5. Valerie R. Schurman.
6. Cape Cod Planning and Economic Development Commission.
7. Friends of the Earth.
8. The Martha's Vineyard Commission.
9. Nantucket Fisherman's Association.
10. Nantucket Island Chamber of Commerce.
11. William T. Howard (APA).
12. Board of Selectmen—Nantucket
13. Nantucket Planning and Economic Development Commission.
14. Nantucket Civic League.
15. Mayor and City Council—Gloucester, Massachusetts.
16. East Hampton Town Baymen's Association.
17. National Resource Defense Council Inc.
18. Nantucket Land Council Reference Fund Inc.
19. Wood's Hole Oceanographic Institute.
20. Kenneth L. Cody.
21. Ann Platt (National Parks and Conservation Association).
22. Town of Nantucket Conservation Commission.
23. Committee for the Protection of Georges Bank.
24. Council of American Master Mariners Inc.
25. Rep. Howard C. Cahoon (Massachusetts House of Representatives).
26. Neil J. Cocker.
27. Gene B. Herman.
28. County of Suffolk.
29. State of New York Department of Environmental Conservation.
30. Governor King—Commonwealth of Massachusetts.
31. John Mansfield.
32. State of New Hampshire—Office of State Planning.
33. Tori Haring Smith.
34. Gloucester Fisherman's Wives Association.
35. Mid-Atlantic Regional Fisheries Council.
36. Messers. Rieser and Spiller, WHOL.

Major issues

Effects of oil and gas leasing on fisheries (almost all comments), effects of oil spill on beach environs, (majority), 50 mile exclusion from Nantucket Island (25%), 30 mile exclusion from Massachusetts beaches, concern for shipping safety.

Mr. STUDDS. Now, let me ask you, the—the Appellate Court in Boston, as you well know, suggested the possibility or suggested, urged your department to look into the possibilities of marine sanctuaries in the George's Bank area.

Do you intend to conduct such analyses prior to lease sale 42?

Ms. ROSS. We are discussing that with the Solicitor's office now. Our expectation is that we will.

Mr. STUDDS. That you will make such an analysis?

Ms. ROSS. Yes.

Mr. STUDDS. If we persist in having difficulties with the department like this, it could solve them in a hurry, the designation of that area as a marine sanctuary.

Ms. Ross. That is not apparent until we know what the marine sanctuary proposal is.

Mr. STUDDS. What is the proposed date for sale of lease 42 now?

Ms. Ross. There is no date. We will be analyzing the opinion that we will try to meet and for instance, the milestones that are set in the OCS amendments and the scheduling and telling the court as soon as we can.

Mr. STUDDS. Will 52 be 2 years after that, according to the general pattern that you described earlier?

Ms. Ross. The question on that is the question of the 5-year leasing program; in other words, that sale date would come after March 1980, and would be governed by the new program, which we expect to have out in proposed form very shortly.

Mr. STUDDS. OK.

Mr. Chairman, I know I have exceeded my time. I happen to chair the subcommittee, which has jurisdiction over these marine sanctuaries programs. A few more letters like this and I am going to take an intense interest in the marine prospect out there. I would hope that we could get a little more response when I think we ask perfectly legitimate questions.

You do a disservice to your department when you unnecessarily create public concern—that we have no shortage of public concern in New England at this point. We do not need any more.

Thank you, Mr. Chairman.

Mr. HUGHES. Mr. Forsythe?

Mr. FORSYTHE. Thank you, Mr. Chairman.

I have a few additional questions here that I would like to pose. This question is directed at Mr. Powers, if we may. It is a question by our colleague, Congressman Dave Treen, who will not be here this morning.

This question concerns section 8(g) of the 1978 amendments.

As part of Congress' efforts to increase coordination between State and Federal Governments, we provided for a consultation procedure to alleviate State concerns that Federal lessees would be draining petroleum from beneath State lands.

Briefly, we provided for consultation to determine whether a common pool exists. Then the secretary proposes a division of revenues from the common pool and the State is given 90 days to accept or reject the proposed division.

During our December oversight hearings, Louisiana's Secretary of Natural Resources, William Huls, filed a statement concerning lack of such consultation in sale 51. The issues he cited involved key questions of State financing, such as provision for collection of State severance taxes on that portion of the oil determined to be from the State's share of the common pool.

In six of the seven cases he cited, the State was collecting a higher royalty from lessees on adjacent State tracts.

Mr. Treen tells us that these seven tracts were withdrawn from sale 51 to be included in sale 58 in July 1979, but still no consultation between your office and the State of Louisiana has taken place.

With less than 4 months to the sale, will section 8(g) work in sale 58? Will Louisiana's Governor have 90 days to accept or reject an offer made after consultation? Can it work in the future?

That is a long question and I apologize.

Mr. POWERS. I understand it.

When we met, I recall saying that Secretary Huls and his staff and myself were in telephone contact shortly before the hearing and would be afterwards, after the hearing. Since that time, I have had two or three conversations—I do not remember the exact number—with Secretary Huls' staff. But we have not yet initiated the type of consultation that we understand the amendments to require.

The reason that we have not initiated that consultation is, frankly, because we are having some difficulty in meeting all the requirements of the act in regard to the development and release of certain kinds of information.

It is true that we withdrew about half a dozen tracts from sale 51 because we were not able to meet that particular requirement of the law in time for the sale, and we are currently hopeful of offering those tracts in sale 58 if, in fact, we are able to meet the requirements of the act. We have not intended to run a short fuse, so to speak, on the State of Louisiana, and skip any of the process, skip any of the steps.

Mr. FORSYTHE. But that is——

Mr. POWERS. We have recently received a letter from the Governor and he stated that, in fact, that I had not initiated the consultation that had been promised earlier, and in fact I have not, because I have not had anything positive to say yet; but as soon as we are in a position to do that, we certainly will.

Mr. FORSYTHE. Obviously, that 90-day period of July sales is getting very close.

Mr. POWERS. Yes, sir.

My calendar looks the same as yours.

Mr. FORSYTHE. Thank you.

My other question is; there have been complaints, Ms. Secretary, concerning the lack of drilling in the 1976 South Atlantic sale area.

I would like to know how many exploration plans have been accepted and what is their status?

Ms. ROSS. In the South Atlantic sale?

Mr. FORSYTHE. Yes.

Ms. ROSS. I would ask the Survey if they are aware of that now or, if not, we could provide it for the record.

Dr. KASH. Yes, Mr. Congressman; we are processing two exploration plans at the present time. We expect to have two rigs drilling in the South Atlantic area.

The slowdown in that area, as I understand, has been the fact that companies are involved and waiting for the necessary rigs to move into the area.

Mr. FORSYTHE. To extend that question perhaps a little more pointedly, I understand that there have been numerous attempts to submit applications for exploration plans but they have not been accepted. Instead, the companies are being told that their plans must be cleared with all of the other agencies before DOI will even accept them.

Would you comment on this situation?

Dr. KASH. I really cannot comment on that. That is not my understanding.

I will check into it and provide you with an answer.
[The following was received for the record:]

APPLICATIONS FOR EXPLORATION OF SOUTH ATLANTIC BLOCKS

No companies have been advised that their exploration plans would not be accepted until all other required Federal permits were secured. Seven plans have been received from three companies. Five of the plans from two companies were determined to be complete and were distributed for State review. The other two plans were determined to be incomplete and the company was advised of that determination 15 days after the plan was received. The company was also advised as to why the plan was determined to be incomplete. See letter below.

U.S. DEPARTMENT OF THE INTERIOR,
GEOLOGICAL SURVEY,
St. Simons Island, Ga., February 22, 1979.

(Attention of Mr. H. L. Bettis)

TRANSCO EXPLORATION CO.,
Houston, Tex.

DEAR MR. BETTIS: In conjunction with your visit to the South Atlantic District office on February 7, 1979, you delivered copies of your proposed Exploration Plan and Environmental Report (ER) for South Atlantic OCS Blocks 1003 and 1005 (Brunswick NH 17-2 Area). The Plans of Exploration and Environmental Reports were submitted for review in compliance with 30 CFR 250.34.

Based upon a preliminary review of the information submitted, I have determined that your proposed Exploration Plan and Environmental Reports are incomplete for reasons explained below. I am therefore returning all of the information submitted with the exception of several file copies retained for our records.

The following is a listing of the major reasons your Environmental Report is being returned as "incomplete" before being forwarded to the affected States and Federal agencies for review and comment. However, in order to avoid further confusion in the event that a revised ER is submitted and forwarded to the affected States for review, I consider other portions of your submittal to contain "minimal information." Thus, Transco should be prepared to furnish other information or to revise your ER again if comments from these States and other Federal agencies indicate that your ER does not contain sufficient "... site specific information available at the time of plan submission to the extent that such information is accurate, current, and applicable to the geographic area covered by the proposed exploration plan." (Source: NTL 78-1)

1. (Block 1003 ER, page 3).—"There are no major shallow geologic structures within the block." This statement must be substantiated. Notice to Lessees (NTL) 78-2 clearly states that data from preliminary conducted on leases in the Atlantic OCS must be interpreted by "... a professional competent in the appropriate field" a summary report complete with the author's name and signature shall be submitted to the Geological Survey. No such report is evident.

2. (Block 1003 ER, page 10).—"Your discussion on Sensitive Areas fails to mention the presence or absence of hard bottom areas on the lease area even though discussions on page 33 indicate that no such areas were detected.

A summary report is required by 78-2 for interpretation of this nature. No such report is evident.

3. (Block 1003 ER, page 11).—"The discussion on Archeological and Cultural considerations contains a statement that "No man-made obstructions, cultural sites, or anomalous magnetic conditions were observed" after conducting a high resolution marine survey of the "project area".

Again, a summary report is required by NTL 78-2 for interpretations of this nature. No such report is evident.

4. (Block 1003 ER, page 12).—"The statement on freshwater aquifers implies that aquifers underlying the lease area play an important role in the water needs of various coastal communities.

Although a thorough discussion on freshwater aquifers is certainly vital to any ER prepared for the South Atlantic, the implication that aquifers underlying the lease area are utilized in supplying freshwater to coastal communities is considered misleading and inaccurate.

5. General.—a. There is no summary report included for the unexploded ordnance (munitions) survey as required by NTL 78-2.

b. No recognition is given to the location of the primary fishing areas for shrimp and crab in the discussions on pages 6-9.

c. The Florida Manatee should be recognized as endangered.

In general, the same comments also refer to the ER for Block 1005.

Additional comments are: (1) The discussion of the Contingency Plan for Oil Spills refers the reader to Appendix C, which is non-existent; (2) The complete copy of Decca Surveys' investigation of the suspected "hard bottom" area has not been submitted to the USGS as you state on page 34.

As stated in our telephone conversation on this subject on February 20, 1979, we hope to discuss these and other problems concerning your ER with you and representative of your contractor on March 5, 1979, in a meeting in this office.

PAUL E. MARTIN,
District Supervisor, South Atlantic District.

Mr. FORSYTHE. I wish you would because if in fact there is a bureaucratic delay built in here somehow, one that is impeding this movement at a time when we are trying to push for diligence on these leases, it seems to me we are indulging in a self-defeating process.

Dr. KASH. I checked with our representatives on the status of the development in that area yesterday and the information that I received does not indicate that that is the problem. I will double check it and provide you with the information.

Mr. FORSYTHE. Thank you.

Mr. HUGHES. Thank you, Mr. Forsythe.

Secretary Ross, if I could just take you back for a moment to a question that was asked by our counsel, Mr. O'Brien, he asked how many lease sales were contemplated in a 5-year plan, and you responded I believe that at least in 1980 the projection was for six lease sales in a year.

Did I understand you correctly?

Ms. Ross. What I indicated—what I meant to indicate was that there is a package of possibilities, options that have been presented to the Secretary that would range in the area from four sales to six sales a year in different locations in the Gulf of Mexico and in frontier areas. He is making his choice from within that range and when he does make the choice, his proposal will be sent to the Governor before coming to the Congress and the package that he used to make the decision will also be sent; so it will be apparent what he considered.

Mr. HUGHES. What concerns me is the suggestion that we would be setting an inflexible number of lease sales in a given year, because it seems to me that is one of the problems that Mr. Studds touched on it just briefly—I also touched on it somewhat—the periodic sale of acreage just to comport to a schedule.

I do not know that we can determine with any degree of accuracy all the variables; very few contemplated the litigation that took a year as to lease sale 40; few contemplated the amount of time that George's Bank litigation took; indicating that we are going to have a certain number of lease sales, smacks of just leasing for the sake of leasing; and I would hope that that is not how we are approaching the 5-year plan.

Ms. Ross. I think you have a good point, Congressman. I used that as a summary statistic. But that was not the objective.

There were all of the other things that the act requires us to consider and, in a rather summary way, I characterized it that way, but it is misleading to do it that way, and I think you are right.

Mr. HUGHES. Mr. Studds also indicated that in his letter, at one point, it was requested that there be a delay. That was one aspect of his two-part letter, because of the litigation and the inability to make another analysis of just exactly what tracts should be offered in George's Bank.

I made the same argument to the Department of the Interior a year ago, after the litigation was concluded relative to lease sale 40, arguing that once again circumstances intervened and that perhaps we ought to take another look.

I made the same argument with regard to the lease sale that just took place in February, lease sale 49, because lease sale 49 did not take into account the fact that we didn't have much of a pause between sales because of the litigation.

I'm not so sure we had enough time to analyze the results from lease sale 40.

Now, would it not make sense to have some built-in flexibility so that we could have sufficient time between lease sales to give industry and the Department of the Interior and others that have a role, time to analyze the results before we move on to leasing additional acreage in that area, that particular region?

Ms. Ross. That is a good criterion to use, and we have tried to reflect it in the schedule and also in the proposal for the 5-year plan.

What is involved here is one of the difficult balancing judgments that the Secretary is called on to make, which Don Truesdell mentioned.

We intend to schedule the leases in such a way that, among other things, that information is available. When we get it set up, we face the question in sale 52, as we did in sale 49, about whether we proceed and the balancing there is what is the value of the extra information? You will never know everything that is out there until you get it all out of the ground, but in each stage, as Dr. Kash said, you learn a little more. What is the value of that information, and how do you weigh that against the value to the country in determining what is there and extracting it, if it is commercial. And of course, as we all know, the values on that second part of the balance pan are just tremendous.

I was asked to calculate what it costs us to wait for the Department of Justice to tell us their competitive review—it was in the area of \$5 or \$6 million just to wait 30 days; that is, not to get the bids accepted and the money in the bank. That is money, but it is a measure of the value of the sale to the country, the value of our sale that is returned to the Treasury. So it is a difficult judgment.

We think the information is valuable; that is why we have gone to on-structure and set these schedules with this spacing; but when we come up against this and say, is it worth it to put off the realization of the benefits that might be there, it is a difficult judgment and so far, the Secretary has wanted to proceed; that is, he has felt comfortable with the information. I cannot project the future, but it is a difficult judgment.

Mr. HUGHES. Well, the Secretary has been very determined in complying with arbitrary lease sales that have been set down and that is irrespective of intervening circumstances; and it has been suggested by some industry officials that there was not sufficient

time to analyze the drilling that is taking place now in the mid-Atlantic prior to the February lease sale, lease sale 49, particularly when you consider it was back in December, I believe, that the COST well, off structure, found significant show of hydrocarbons—

Ms. Ross. Well, the industry position, that is very interesting, because they press us very strongly to keep on schedule. They say they planned for it; they want it to be reliable. They like it to be active, aggressive, but above all else, their information to us, if you set it down—we are doing our exploration, our geophysical work; we are making investments; we are developing capital to put up and bid; do not change that sale on us. There are a lot of voices in the industry.

Mr. HUGHES. There are a lot of factors that go into the industry decision, many of which we are aware of and I am sure many that we are not aware of.

Obviously, the profit motive is the overriding motive and the industry has to determine what their capital availability is, what is available now, and in the future. There are a whole host of factors that go into the determination as to whether they are going to bid in a given area; and it is not always related to the seismic and geophysical information that they have available to them.

I am not so sure that the present policy with regard to holding firm on a lease sale, because industry feels very strongly about it, is altogether relevant. I think that you, the Department of the Interior, have to determine what is in the public interest; I think it is important to have some degree of certainty for the industry so that the industry can plan; so that they can plan their entry into the capital market, so that they can plan their procurement, so that they can determine what their priorities are. But, the overriding interest is the public interest.

I am not so sure that we have the right mix as yet, and I do not think that we have to hold to an arbitrary standard at the present time because we do not have in place yet a 5-year plan.

Let me ask another question.

Do we have seismic and geophysical information for all the acreage that was offered in the February lease sale 49?

Ms. Ross. I would ask the Survey that.

Dr. KASH. Yes; we do have.

Mr. HUGHES. One of the criticisms from the General Accounting Office directed to lease sale 40 was that roughly 25 percent of the acreage offered had no seismic or geophysical information whatsoever collected.

You are telling me that we had seismic and geophysical information on all the tracts that were offered, lease sale 49?

Dr. KASH. Yes, sir, it is incomprehensible to me that—we have it.

Mr. HUGHES. You have it?

Dr. KASH. Yes.

Mr. HUGHES. You indicated that one of the difficulties in the South Atlantic was that companies had difficulty getting jack-up rigs for that area. When did that lease sale take place in the South Atlantic?

Dr. KASH. March 1978.

Mr. HUGHES. March of 1978? Well, it is obvious that the availability of rigs, jacked-up rigs and otherwise, is fluid.

Dr. KASH. That is correct.

Mr. HUGHES. And in the past, I found that Interior has not paid very much attention, as much as they should, anyway, to equipment availability I am just hopeful that in the months ahead we will pay a lot more attention to capital needs and availability and equipment needs and availability, because obviously it has such a very direct relationship on our policy, I am just hopeful that even though we will have an accelerated leasing program, that we will have a program that will also take into account the industry's ability to explore and develop the acreage that already exists in their portfolios as well as what we are going to be making available to them.

Mr. Emery?

Mr. EMERY. Thank you very much, Mr. Chairman.

A few minutes ago you discussed some of the aspects of the leasing schedule. According to the time schedule in Public Law 95-372, the 5-year leasing schedule is due to be published.

What is the status of that 5-year leasing schedule? Have we made the recommendations and when will it be available?

Ms. Ross. We have done the work in the Department governing the procedures that will get us to the program. We have requested comment from the various parties that we were required to consult with.

Mr. EMERY. Who are some of those?

Ms. Ross. With State and local governments, with the industry, environmental groups, with other Federal agencies.

Mr. EMERY. Which other Federal agencies?

Ms. Ross. With the Attorney General, with the Secretary of Commerce on Coastal Zone Management. Are there others?

Mr. POWERS. With the Departments of Energy, Justice, EPA, CEQ, Defense.

Ms. Ross. We have done that consultation and received material from a number of those groups and have prepared proposals for the Secretary. He has given us some guidance.

On the basis of that, we are putting that into a final form. If he says, yes, that is what I meant, it will go to the governors, we think very shortly in a day or two.

Mr. EMERY. Can you outline some of those recommendations for lease schedule for us?

Ms. Ross. I do not know where his approval is going to come out. That is, we have not received it yet. So I cannot tell you what that content will be. I do not know it for sure, no.

Mr. EMERY. We understand that the recommendation is going to be maybe five or six lease sales a year, possibly even less, and that does not really appear to be an accelerated program. We understand that the recommendation will be five or six lease sales a year offered for sale. The record over the last 10 years shows that when smaller tracts are offered the result is better. In fact, we have some figures that indicate that when the sale category is between 478,000 and 700,000 acres, actually the larger percentage of the acreage offered is leased. When in fact the acreage approach is 1 million acres, the percentage of the area available, that is finally

leased, is reduced and to be specific, approximately one-third of the acreage of a 1-million acre tract is leased, whereas nearly two-thirds of that in a smaller group.

Would you comment on that?

Ms. Ross. That is a very interesting finding. I have seen that as part of the production goals, but I have not had a chance to analyze them. Obviously, there are a lot of other considerations than the size of the offering in what is taken up by the industry. So I would want to look pretty closely at what lies behind these summary statistics, but it is an interesting result.

I think you could ask yourself the question: Would you have leased more if some of these larger sales had been smaller?

Would the industry have felt the same acreage was as interesting if you had not offered as much?

I do not know, but it is interesting. They found an interesting relationship here which we will certainly discuss with them.

Mr. EMERY. It appears to me that after looking over some of the figures, looking at some maps, that it makes sense. Take the Baltimore Canyon area, that is a heck of a large area stretching from the Carolinas clear to New York, and no one really knows what is under that bottom without doing some expensive drilling. Now, it makes a lot of sense to me that if large tracts are leased in a relatively small area of the canyon, then all you are going to know after drilling and leasing that area is what lies in one relatively isolated portion. Whereas if a variety of smaller tracts were leased over that area, it would be like shooting a shotgun. The idea is you know a little bit about the area.

How is the company going to react? Are they going to be interested in drilling in an area where they definitely know something because there have been other tracts explored in that particular area, or are they going to be interested in examining other parts of the bottom that have not been tested or examined?

That is a question that has to be analyzed, but the figures seem to indicate over the last 10 years, and I am sure they will need to be examined further; that they seem to indicate that the greater success and the greater interest is demonstrated when smaller tracts are available and they are spread out a little bit more.

I would appreciate comment or analysis from your people.

Ms. Ross. We will look at that.

[The information follows:]

RESPONSE TO MR. EMERY'S QUERY

We have examined data on OCS lease sales over the past three years to determine the factors that most influence the percent of the tracts offered that are leased.

Although there is some indication that offering more acreage results in leasing lower percentages, this relationship is not the dominant one, especially in the range from 300,000 acres to 1,500,000 acres per sale. In most cases in which larger offerings have resulted on lower percentages leased, the decrease has not been sufficient to result in leasing of fewer tracts in absolute terms.

The resource prospects appear to have a stronger and more consistent effect on the percentage leased than the size of the offerings. Sales with good prospects, as measured by more intense bidding, also tend to result in higher percentage of offerings leased. For example, lease sales near developed areas of the Gulf of Mexico generally have better prospects, draw more interest, and produce higher percentages leased.

Ms. Ross. I would make one comment on the distinction between the Gulf of Mexico and frontier areas.

The Gulf of Mexico is a known producing area, widely leased. We tend to offer tracts that are widely dispersed. They tend to get a lot of interest because they're known to be producing. If you were to control for the Gulf of Mexico in here, you might see interesting results. We would like to look at it and tell you what we thought after considering the points about the gulf and the other areas. Of course, the interest in the lease reflects the geology and you would have to control for prospectiveness of the areas—so there are a number of other things that you want to look at, but we will do that.

Mr. EMERY. The further comment that I will make is that we also have information that the schedule will include two or three tracts in the Gulf of Mexico as a part of the five or six tracts a year that are to be leased. Now that would leave three or four tracts a year for other parts of the country where we really do not know anywhere as near as much as we do about the gulf. Given the fact that three Presidents and various Members of Congress, several administrations, Secretaries of Interior and a variety of responsible people in the government over the last 10 years or so, representing several different political philosophies, I might add, have called for an accelerated program, it occurs to me that if we are leasing in areas that we know something about and not putting our best foot forward in areas that need to be explored, then this really does not appear to be an accelerated program, at all, especially if it is not too responsive to the concerns that the country is now facing with the need to develop domestic resources.

I throw that out as an observation, and I feel that it would do well for you to look at that.

Ms. Ross. We have looked at that in the 5-year program.

Mr. EMERY. Thank you very much.

Mr. HUGHES. Mr. O'Brien.

Mr. O'BRIEN. Secretary Ross, what would be the effect on the OCS leasing program if we created a Department of Natural Resources within the administration?

Ms. Ross. I think that remains to be seen. I understand that there is a proposal now and I understand the elements of it; that is, the major agencies that would be a part of it, but what the internal structure would be is not decided, and that would be, I would think, the important bearing on the question of how the program would operate.

Mr. O'BRIEN. With respect to the formulation of the regulations, there has been some speculation in the press as to the action of staff members of the Environmental Protection Agency regarding the involvement of the inflation fighters in the administration and their regulatory process.

Has there been any involvement by Mr. Kahn and his team in the formulation of OCS regulations and if not, will there be?

Ms. Ross. There has not been. I do not know of any basis for there being one at this point.

We are doing our job under Executive Order 12044 to make sure that the regulations that we put in place are no more burdensome than to carry out the statute, and we have not had any inquiries that I am aware of.

Have you gentlemen? No? We do not expect any because the regulations that we are promulgating are not major cost imposing regulations in the sense of either delay or in the sense of direct cost to the private sector.

Mr. O'BRIEN. Under section 15 of the act, two reports are required to be submitted to Congress by the Secretary of the Interior within 6 months of the end of each fiscal year. One on the OCS activities for the past year and recommendations for improvement.

The second on recommendations for promoting competition in OCS leasing. In connection with the second one, there are to be consultations with the Attorney General.

How are those studies coming? Has work commenced on those yet?

Ms. Ross. Work has begun on the first report on the OCS activities. We are going to have to get started on the other report.

There was some question about what fiscal year, since the act passed within days of the end of the fiscal year, but we have determined, I believe—I may have to correct this, but I believe we have determined that we ought to prepare one on the fiscal year preceding enactment and having made that decision, we'll proceed to do that.

Mr. O'BRIEN. Thank you, Mr. Chairman.

Mr. HUGHES. Any of the members have any other questions?

I just have one more, Secretary Ross.

In the development of the 5-year plan, is the Department of the Interior taking into account that if indeed over a period of 5 years we are going to have certain constraints, financial and otherwise on the part of the industry in exploring, developing, hydrocarbons, that we are going to want to encourage the industry to in some instances have a well-balanced plan; that is, if we bring on line areas where there is high probability of hydrocarbons.

For instance, if we have a shortage during that 5-year period of equipment and we cannot meet all our needs in all areas, just because the industry would be spread too thin are we going to try to determine a well-balanced plan so that we are not pulling rigs off of areas with high potential, to place them in areas with relatively low potential?

Ms. Ross. The reason that we have gone out there is that other things equal, we are going to the areas that are high potential, so that that is a criterion for the program.

I would mention once again that—and I think you will be talking with the Department of Energy—that they have a rather extensive chapter in these production goals. They provided us in draft form—that speaks to the question of constraints, and they discuss rig availability and capital. They end up suggesting that perhaps seven sales a year, as many as seven sales a year, could be conducted and they do not appear to find any capital constraints or rig availability constraints controlling that. So if we are operating within that range, and if the analysis that they perform is something that we can rely on and we have it now for review, that would be perhaps responsive to your wish.

Mr. HUGHES. Thank you.

One final question. Is the Interior Department reviewing the due diligence requirement?

For instance, the Chevron lease in the Santa Barbara Channel, which apparently has been resolved, is an example of a company that has waited for the full 5-year term before anything was done.

I recall that there was an extension granted last November or December, but a rig was supposed to be placed on the tract in February. Is there any effort to try to redesign the due diligence requirement provisions in the lease so that there will be certain benchmarks that companies will have to follow so that they are not only looking at the due diligence requirement at the expiration of the lease but during the term of the lease?

Ms. Ross. As I mentioned, the draft regulations that we have out on exploration plans do have a proposal that they be filed within 2 years of the date of the lease; that would be such a benchmark.

I think that we would be very cautious about going in a major way to telling operators how to conduct activities in something that is as quixotic as exploration. Where what you find determines whether you will drill another well and where there are considerations about subcontractors. As you know, for the groups of equipment and people and capital that is brought together here, it is very extensive. I think we are looking at it, but we would be cautious about setting a whole set of rigid guidelines.

Mr. HUGHES. Would you submit for the record the basis for your present procedure for determining whether bids should be accepted or rejected?

You did testify about a year or a year and a half ago on that subject and I understand there have been some changes in the process of analyzing bids to determine whether it is in the public interest to accept or reject, and I am wondering, if we could receive that for the record. Without objection, so ordered.

Ms. Ross. We can provide that.

[The following was received for the record:]

BID ACCEPTANCE

After a sale, each high bid is compared against two values:

1. *The mean of the range values (MROV).*—The MROV is the Geological Survey's estimate of the value of the tract. The estimate is prepared using a computer simulation model which includes assumptions about geological, engineering and economic factors. The model used by the Geological Survey generates from 500 to 2,000 values on each tract based on variations in input parameters. The arithmetic mean of all the values is the MROV.

2. *The discounted mean of the range of values (DMROV).*—The DMROV is the MROV, discounted at 10 percent annually for 2 years. Thus, the DMROV is always less than the MROV. If a high bid on a tract is rejected, it is considered that in most circumstances it will not be possible to reoffer the tract for sale for about 2 years. The MROV is discounted to reflect the present value of the loss of revenue to the government for such a delay in receipts.

If a high bid is equal to or exceeds the DMROV, the lease is normally awarded to the bidder. If the high bid is lower than the DMROV, it is put to a third test.

3. *Average evaluation of the tract (AEOT).*—The AEOT is a mechanism whereby the estimates of the value of the tract by bidders, as expressed by the amount of their bids, and the number of bidders competing for the tract, are considered. The AEOT is computed by summing all bids on the tract and the MROV, and dividing the sum by the number of bids plus one. In this way the MROV is treated as if it were another bid. The reason the AEOT is calculated is because in some instances, if there is a sufficient number of bids on a tract, there may be a weight of evidence that the Geological Survey's estimate of value, as reflected in the MROV, is in disagreement with other knowledgeable estimators of the tract's value, as expressed by their bids. In such cases the value other estimators have put on the tract is useful information and should be considered in determining whether the high bidder should be awarded the lease. In most recent cases, the lease has been

awarded to the high bidder if the high bid is lower than the DMROV, but more than marginally higher than the AEOT, and if there are three or four bids or more on the tract.

After a sale, all high bids are printed on a matrix along with the MROV, DMROV, and AEOT. This matrix is reviewed by the Secretary, recommendations on bid acceptance are made to him by his advisers, and the Secretary decides on which high bids to accept or reject.

Mr. MILLER. Will the gentleman yield?

Mr. HUGHES. I will be happy to.

Mr. MILLER. On the previous question of diligence, what guidelines are placed now for a company to understand what their rights and obligations are going to be at the end of that lease, whether it be renewed or terminated, based upon diligence?

Ms. ROSS. I think that I would ask the survey, who implements that, to discuss the rules that they are operating under. I believe that they now have delegated authority to make those determinations.

Dr. KASH. Yes, it is the position of the Department at the present time—it has been stated by the Secretary, it is his expectation that major exploration will be taking place during the primary term of the lease. The operating rules at the present time are that a lease will be extended if in fact drilling is taking place at the end of the primary term and if drilling continues with no more than a lapse of 90 days between the drilling of one well and the beginning of the next, there are no formal diligence regulations by the Department of the Interior or the geological survey.

Mr. MILLER. But the understood agreement is that I must drill on my lease some time prior to the end of the lease?

Dr. KASH. That is correct. That has been the Secretary's statement and that has been the basis of his decision with regard to some of the units in California.

Mr. MILLER. To what extent does that philosophy go to the question of production?

Dr. KASH. Well, you raise a very good question.

Diligence really needs to be thought of, it seems to me, in two categories.

One has to do with exploration, the other has to do with the production. Approximately a year and a half ago the Secretary put into the geological survey's budget additional manpower and money to establish a production diligence program within the geological survey. That is most evident in the Gulf of Mexico where we have a distinct unit, which is in the business of looking after diligent production; that includes monitoring, investigating, looking after shut-in wells, investigating the possibility of additional drilling, that sort of thing.

It is now in place and operating; that unit is investigating on a sequential basis, various fields in the Gulf of Mexico and I think is beginning to operate successfully in that area.

Mr. MILLER. What are the results of that? Have they told people to step-up production or to improve their capacity to produce or—

Dr. KASH. I have asked that question and the process is one that has to be underlined as a process. There appear to be two things that have happened.

One is the establishment of the diligence unit, appears to have been something duly noted by the industry in anticipation of this

particular focus on production diligence. I believe that we have seen something of an anticipated reaction on the part of the industry.

The second thing is——

Mr. MILLER. I assume that anticipated reaction is increase in production?

Dr. KASH. That is correct. The other portion of it is that almost all of the specific activities that take place on producing leases in the Gulf of Mexico require that permits be issued for shutting in wells, or carrying out almost every function, and this diligence unit reviews this and in general it is a process of discussion. The people working in that unit tell me that there has been additional production as the result of that process. But it is very seldom that it comes to a major case with regard to the overall development of the field, because that is not really the way in which we process the activities.

Mr. MILLER. Thank you for your answer.

I just wonder, Mr. Chairman, if it might not be worthwhile if that unit could provide for this committee a summary of their activities and what they feel they have accomplished and what they anticipate? I think it would be very helpful to us to know.

I do not expect a 3-year study but just a summary of what has taken place since they have come into existence and I would assume that their best expertise would be in the gulf.

Dr. KASH. That is correct.

Mr. MILLER. But also what they anticipate in terms, as we bring more areas into leasehold arrangement, what they anticipate in the future, whether it has been worthwhile.

Mr. HUGHES. Secretary Ross, could that information be furnished?

Ms. Ross. I expect it could.

Mr. HUGHES. Without objection, it will be entered for the record. [The following was received for the record:]

ACTIVITIES OF DILIGENCE UNIT

1. *Enhanced recovery of oil and gas.*—Pursuant to the provisions of section 15 of OCS Order No. 11, operators of Federal OCS oil and gas leases in the Gulf of Mexico are required to submit a plan for timely initiation of enhanced oil and gas recovery operations. Those plans to increase ultimate recovery under sound engineering and economic principles are required to be submitted with each annual Maximum Efficient Rate (MER) review. In the absence of an enhanced recovery plan, operators are required to submit a statement explaining why enhanced recovery operations are not feasible.

The Diligence Section is presently reviewing these plans and statements to identify reservoirs which require further analysis.

Reservoirs requiring further analysis will be studied the Diligence Section. If it is determined that an enhanced recovery project should be initiated, the operator will be required to initiate enhanced recovery operations or to show cause why he should not commence such activity. When it is determined that a proposed enhanced recovery project should be modified, the operator is required to modify the conduct of the project accordingly.

The activities under this portion of the diligence program should result in increased ultimate recovery of oil and gas. This increase in ultimate recovery should be reflected in the rate of production from the reservoirs which are subject to an enhanced recovery program.

Currently, there are 269 active supplementary (enhanced) recovery projects in the Gulf of Mexico. Most are attic oil recovery projects which are useful in recovering updip oil in the relatively small steeply dipping reservoirs which are prevalent in the Gulf. The progress of these projects is monitored monthly.

Operator's submit their annual reviews of the MER and production for each year on or before September 1. The Rate Control Section reviews these submittals from a conservation viewpoint prior to approval or disapproval. The Reserves Section has prepared and maintains reserves to production (R/P) ratios, utilizing data submitted in support of MER; and Maximum Production Rates (MPR). These ratios are maintained by field and reservoir, for 72 oil fields (375 reservoirs) and 69 gas fields (195 reservoirs). Those fields account for approximately 85 percent of the production from the Gulf of Mexico. MER limitations on gas reservoirs imposed by OCS Order No. 11 have been removed requiring operators to produce gas reservoirs at the safest maximum production rate economically feasible.

Those fields and reservoirs exhibiting reserves to Production ratios which appear to be to great are identified for further study by the Diligence Section.

2. *Field studies.*—As of March 1, 1979 five field studies involving approximately 390 oil and gas reservoirs had been completed. Of the three other field studies in progress, one was 85 percent complete.

One of the completed field studies verified that there appeared to be no additional potential for increasing production. The field was over 70 percent depleted of its oil and gas reserves and we were unable to identify any additional development or enhanced recovery operations that might result in increased producing capability or ultimate recovery.

One of the completed studies identified several possibilities for increasing production capability. At the time of the study, the production capability of the field was approximately 529 MMCF per day. In January 1979, the productive capacity was 602 MMCF per day, as determined from required well tests. This increase was attained primarily through required additional development, i.e., eight workovers and recommendations, and the drilling of three additional development wells. The field study also was instrumental in identifying the need for a deep test exploratory well and additional compressor capacity to maintain maximum deliverability. The deep test is scheduled to be commenced in April 1979, and installation of the additional compressor capacity is expected to be completed by the end of April 1979.

The results of three of the completed studies are currently being reviewed and the identity of any operations considered feasible to increase production will be forwarded to the Chief, Conservation Division. Tentatively, it appears that these field studies will identify workover and recompletion operations together with additional drilling operations and increased compressor capacity as means to increase ultimate recovery and production capacity. One of the three fields is still actively developed but, in compliance with our request, the operator filed an amended Plan of Development in March 1978 calling for additional drilling operations. Our oversight activities in this case prompted the operator to reassess the current development and production plans with regard to increased ultimate recovery and to an accelerated increase in production capability. Where an operator accelerates from newly perforated reservoirs does not usually result in an increase in the current total daily field production rate. However, the increase does significantly offset the decline in the daily production rate being experienced in the older producing reservoirs.

One of the unfinished studies is about 85 percent completed and is being actively pursued by a special task force. Although this is probably the largest and most complex field in the Gulf of Mexico, the study should be completed in two to three months.

The other two studies are in varying stages of completion but are relatively inactive at the present time due to the need to reassign personnel to more pressing priority projects. Work on these studies will be resumed as soon as personnel become available.

At this time, we do not plan to perform a sophisticated study of each and every oil and gas reservoir in the OCS Gulf of Mexico. However, during the process of conducting reservoir studies for other purposes, such as estimation of reserves and MER determinations, our geologists and engineers identify oil and gas fields and reservoirs which appear to have potential for increased production capability. They will also be able to identify oil and gas reservoirs and fields, which have little or no potential for increased ultimate recovery or production capacity. We intend to concentrate on those fields and reservoirs which preliminary analyses indicate have the greatest potential for increased production capability.

In fiscal year 1979, we plan to complete the three full-scale field studies involving about 200 oil and gas reservoirs that are currently in progress and to initiate six additional field studies. The six additional studies will involve about 400 separate oil and gas reservoirs. Our initial estimate of 14 field studies for fiscal year 1979 had to be reduced to six as a result of our having to reassign personnel from this program

to implement a new high priority program required by the Natural Gas Policy Act (NGPA).

In fiscal year 1980, we will finish any studies not completed in fiscal year 1979 and initiate 10 additional field studies, involving about 700 oil and gas reservoirs. The number that can be completed is dependent upon when we can return personnel to these projects. However, under current and estimated future conditions of personnel availability, we plan to complete in fiscal year 1980 seven of those studies initiated in fiscal year 1980.

In fiscal year 1981, we will finish those field studies that are not completed in fiscal year 1980 and initiate 10 additional, involving about 700 oil and gas reservoirs.

We have made no specific projections of output beyond fiscal year 1981 but expect to continue field studies at the rate of about 12 per year until all significant fields and reservoirs have been reviewed. It is estimated that this work will continue through about fiscal year 1984 to complete what we consider significant fields at the time. This projection, however, is subject to change based on rates of depletion and the development of new field discoveries.

(3) *Gas flaring*.—At the time OCS Order No. 11 was modified to formally control the venting and flaring of natural gas produced with oil (oil-well gas) July 1974, approximately 12 percent of all gas produced in association with oil was being flared. This flaring of oil-well gas resulted from emergency and other situations; which required that the produced gas be vented or flared or the production of the associated oil be shut-in. Non emergency situations included those where the compression facilities were not available to facilitate beneficial use of the gas then being vented or flared.

In October 1974, there were 35 oil-well gas flare situations that were classified as nonemergency. Those flaring situations were investigated to determine the feasibility of installing compression facilities and eliminating the flaring of oil-well gas. As of December 1978, there were only 12 locations where oil-well gas was being vented or flared for extended periods with the approval of the Oil and Gas Supervisor, a reduction of 65 percent.

In March 1975, further guidelines which related to the flaring of oil-well gas were established and the portion of oil-well gas flared was reduced to about five percent of total oil-well gas produced. The percent of oil-well gas flared fluctuates from month to month. Since October 1977, the average percent of oil-well gas flared has been 4.85 percent. Attached is a table showing the volume of oil-well gas flared and the percentage of produced oil-well gas which was flared each month since October 1977. The listing stops with the month of December 1978. Total produced oil-well gas in December 1978 was 30,794,831 MCF or 8.26 percent of all gas (oil-well and gas-well gas) produced in that month. The total volume of oil-well gas which was flared amounted to 0.37 percent of the total volume of gas produced in December 1978.

We closely monitor temporary emergency flaring of oil-well gas. We will continue our concerted effort to reduce the total amount of oil-well gas flared during each emergency to a minimum. We will continue our critical review of the reasons for extended gas flaring situations with the view to eliminate all unnecessary gas flaring.

FLARED

Month and year	Total oil-well gas flared (MCF)	Percent of total oil-well gas produced
October 1977	2,103,137	6.89
November 1977	1,512,618	4.90
December 1977	1,469,774	4.56
January 1978	1,680,098	5.67
February 1978	1,329,689	4.91
March 1978	1,498,131	4.60
April 1978	1,274,862	4.30
May 1978	1,441,916	4.56
June 1978	1,488,995	4.71
July 1978	1,198,267	4.41
August 1978	1,498,647	4.78
September 1978	1,377,275	4.75
October 1978	1,513,223	4.79

FLARED—Continued

Month and year	Total oil-well gas flared (MCF)	Percent of total oil-well gas produced
November 1978.....	1,295,408	4.30
December 1978.....	1,489,973	4.84

4. *Reporting and monitoring of shut-in wells.*—A shut-in well report has been developed to fulfill the requirements of the OCS Lands Act Amendments of 1978. This report includes the status of all restorable shut-in wells that have previously produced and new wells that are completed but waiting on installation of surface equipment. The report includes, for each well, the reason the well is in a nonproducing status, the action or type of work required to place the well into a producing status, and the date that work to place the well on production is expected to start.

Operators submit their best estimate of the date that corrective action will be initiated to place each shut-in well on production. Timely performance of the remedial operations will be reasonably required. Production will be required if the workover is successful. Many workover operations are not successful, however, and an operator may choose to attempt a more complicated major workover prior to abandoning the well. All such actions are continuously monitored by the USGS to assure continued progress toward the restoration or commencement of production.

Presently, the shut-in well status records are updated monthly. District personnel in each District verify the shut-in status of wells through field checks and reviews of field records in conjunction with routine platform inspections. This field verification program was implemented in December 1978, and the status of shut-in wells are being verified at the rate of approximately 400 wells per month. The wells restored to production and removed from the list of shut-in wells, and those shut-in and added to the list of shut-in wells during a month are also monitored. An average of 175 wells are placed on production each month by: (1) Restoration of production by workover operations; (2) restoration of production by the recompletion of a well in a different zone; (3) a new well completion. Approximately 75 percent of the wells placed on production each month are wells that are restored to production by reworking the existing producing zone. An average of 184 previously producing wells are added to the list of shut-in wells each month. The following is a listing by month of the rate at which producing wells are going off production and the rate at which shut-in wells are being restored to production:

Month	Year	Wells placed on production each month by new or recompletion	Wells shut-in having pro- duced the pre- vious month
April	1977	136	213
May	1977	108	168
June	1977	159	172
July	1977	205	140
August	1977	202	234
September	1977	189	180
October	1977	157	199
November	1977	158	126
December	1977	130	216
January	1978	165	199
February	1978	150	199
March	1978	163	163
April	1978	199	207
May	1978	216	185
June	1978	246	167
July	1978	165	198
August	1978	184	181
September	1978	197	201
October	1978	175	181

Month	Year	Wells placed on production each month by new or recompletion	Wells shut-in having pro- duced the pre- vious month
November	1978	194	180
December	1978	191	155

In the future, a list of all wells scheduled to be reworked during a calendar quarter will be generated on a quarterly basis. The projected workover activities of each operator will be monitored to assure that timely progress toward the restoration of wells to production is maintained. Reports will also be generated listing all shut-in wells in an active or inactive drilling status, shut-in wells with no future utility, and shut-in wells without future utility but which may have a potential for additional production from another zone. All these reports will be used in the continuous monitoring of the status, or changes in status, of shut-in wells and in monitoring projected target dates for work to restore wells to production. Wells reported as having no future utility will continue to be monitored as to possible potential utility which may have previously been overlooked, and wells in drilling status will be monitored to insure they are completed and placed on production as rapidly as possible.

5. *Suspensions of production plans of exploration and plans of development and production.*—We have reviewed 92 applications for Suspensions of Production and 39 application for revisions of existing Suspensions of Production during the past 6 months. Such reviews include a thorough analysis of the operator's plans for future activities, recommendation for revisions of those plans and proposed schedules for accomplished, identification of various options available to decision makers, and the development of a recommendation for action.

During that time, we have reviewed, from a diligence point of view, 78 lease Plans of Exploration, 27 lease Plans of Development and Production, and 81 unit Plans of Operations and development. These reviews consist of a comparison of the exploration and/or development and production activities planned by the operator with what is known by USGS about the potential oil and gas producing characteristics of the geologic structure. This comparison is made for the purpose of assuring prompt and efficient lease exploration and development. We identify unleased tracts offsetting the leases and unit areas covered by the plan that may have potential for future leasing.

The strict review accorded applications for Suspensions of Production, Plans of Exploration, and Plans of Development and Production have resulted in operators planning their activities much earlier in the life of a lease and, as a result, the period of time between lease acquisition and the commencement of production should be significantly shortened.

Operations are planned, commenced, and continued on a more accelerated schedule and where possible, concurrently performed. For example, nine of the unit plans we reviewed were initially disapproved because the proposed development was not considered adequate. Seven of the nine plans were amended to our satisfaction, one unit agreement was terminated, and termination is being proposed in the other case. We will continue to analyze and make recommendations with regard to each application received for Suspension of Production, Plan of Exploration, and Plan of Development and Production from the point of view of prompt and efficient exploration and development. We estimate that we will review, analyze, and process approximately 180 applications for Suspensions of Production or revisions thereto, 400 lease Plans of Exploration and Plans of Development and Production, and 160 unit Plans of Operations and Development each year.

Mr. HUGHES. Mr. Forsythe.

Mr. FORSYTHE. I have one additional question, Mr. Chairman.

Geothermal, as I understand it, is the only regulation that has been promulgated to date. As you know this is going to be of substantial interest in the gulf. How do we feel that the environmental consideration in Public Law 95-372 can adequately apply to this, since the facility for electricity will have to be built in the gulf?

Ms. ROSS. You are speaking of geothermal in the gulf?

Mr. FORSYTHE. Yes, in the gulf.

Ms. ROSS. But offshore.

Mr. TRUESDELL. We have just modified the regulations in conformance with the new act, as you point out, to permit us to issue geothermal leases; but going beyond into the step that you mentioned, we have not looked at it yet. There is a kind of a futuristic program, but we are putting the regulatory mechanism in place so that we can issue geothermal leases.

Mr. FORSYTHE. Do you have any prime prospects for leases in this area again?

Mr. TRUESDELL. There has been several conferences in the Gulf of Mexico recently. Maybe USGS could respond to the potential as they see it.

Dr. KASH. There are two things going on. The USGS has a program which is investigating geothermal resources in the Gulf of Mexico, and we are also cooperating with the Department of Energy. The Department of Energy, of course, is interested in the development of the economically viable technologies for utilizing geothermal resources. It is my impression that at this stage of the game no one believes it is economically attractive to move to the point of development of geothermal resources on the Outer Continental Shelf.

Now, I would note one thing, and you may have had part of your intent being that some of the geothermal resources in the Gulf of Mexico are thought to have substantial amount of gas, of methane in them; and, again, the Department of Energy has a program that is being carried on in connection with that, but it still is very much at the research and development stage, and I know of no evidence of any groups in the private sector wishing to buy leases.

Mr. FORSYTHE. Well, you mentioned the gas and this is the first that we have heard about it in connection with the situation. So you could be in a situation of having combination of geothermal and gas and that would have to come back under your leasing program, for a hydrocarbon lease, would it not?

Dr. KASH. That is correct.

Mr. FORSYTHE. OK, thank you.

Mr. HUGHES. Thank you, Mr. Forsythe.

And do my colleagues have any further questions?

If not, I want to thank the panel: Secretary Ross, Dr. Kash, Mr. Truesdell and Mr. Powers. We appreciate very much your responsiveness and your patience and at this point we will recognize the next panel.

Thank you so much.

Mr. HUGHES. I would request Mr. Walsh, Mr. Whiting, and Mr. Langenkamp to come forward. We are going to ask you to appear as a panel.

Mr. Walsh is deputy administrator, National Oceanic and Atmospheric Administration, Department of Commerce; Mr. Whiting is deputy assistant secretary, Occupational Safety and Health Administration; and Mr. Langenkamp is the deputy assistant secretary, Oil, Natural Gas and Shale Resources, Department of Energy.

We have copies of your statements, which without objection, we will receive as part of the record. I wonder if we can ask you to summarize as best you can, your statements, so that we can get into the questioning at the earliest possible time.

We will start first with you, Mr. Walsh, as our leadoff witness.
[The following was received for the record:]

TESTIMONY OF JAMES P. WALSH, DEPUTY ADMINISTRATOR, NATIONAL OCEANIC AND
ATMOSPHERIC ADMINISTRATION OF THE DEPARTMENT OF COMMERCE

Mr. Chairman, members of the select committee, I am pleased to appear before you today to discuss NOAA's implementation to date of the Outer Continental Shelf Lands Act Amendments of 1978, Pub. L. 95-372 (the "OCS Amendments").

I know that you had requested the Secretary of Commerce to personally appear. However, her schedule would not permit her to accept your kind invitation, and I have been asked to represent her views.

When I testified before the Committee on December 7, 1978, I described how the OCS Amendments change or add to NOAA's direct program responsibilities. Since that date, NOAA has taken a number of actions to live up to those responsibilities and has been granted additional duties under the Oil Spill Title of the OSC Amendments. I would like to briefly describe our actions and then answer any questions you may have.

Coastal Zone Management

First, I would like to mention NOAA's efforts to implement Title V of the OCS Amendments—amending the Coastal Zone Management Act.

The OCS Amendments significantly modify the Coastal Energy Impact Program ("CEIP") established under section 308 of the Coastal Zone Management Act of 1972. Both the formula grants provision (section 308(b)) and the planning grants provision (section 308(c)) have been amended, as has been the Federal consistency requirement set out in section 307.

In response to the amendments to the Coastal Energy Impact Program, revised proposed regulations were published in the Federal Register on January 15, 1979, and the comment period closed on March 3, 1979. A number of comments were received, and these are being evaluated in preparation of final regulations. Final regulations should be published in April of this year.

Most of the changes to the program, and thus the regulations, were those mandated by the statute, such as the 2 percent minimum share and the 37½ percent ceiling, the changes in the formula, and other related changes. At the same time, a number of administrative changes were proposed to simplify and improve program operations. So far, these changes have been generally non-controversial and we expect the program to go forward on schedule.

Concerning preliminary allotments of the 1979 formula grants under Section 308(b), on the basis of the criteria in the statute and regulations, only Hawaii, Maine and New Hampshire were found not to be states affected by OCS oil and gas activities. Pennsylvania funds were held aside pending a determination whether it is eligible to receive CEIP funds in light of the status of its coastal zone management program. Of the remaining 20 states, Alaska, Florida, Georgia, Louisiana, and Texas were the only ones to receive more than 2 percent share provided for in the 1978 amendments.

NOAA has also proceeded with the implementation of the OCS State Participation Grants provision provided under Section 308(c)(2). A Technical Paper was released for comments on December 14, 1978, and the development of proposed regulations was begun on the basis of that Paper and the responses received from the states and other interested parties. The proposed regulations will be published in the Federal Register within the next few weeks.

Mr. Chairman, I am aware that you have written the Secretary about funds for these state grants and I have brought with me her response, and a statement explaining the Department's present position.

As you know, the fiscal year 1979 and fiscal year 1980 Administration Budgets do not include funds for those grants. In light of the time required to establish the grant program, we do not believe that fiscal year 1979 funding would be of great use. Applications for funds could not be received or evaluated until the final regulations are adopted, so fiscal year 1980 would be upon us before funds could be distributed. NOAA and the Department of Commerce are continuing to explore appropriate means for funding this program in fiscal year 1980.

To summarize, the matter is under review by the Department and several ideas have been considered. At the present time, we are considering a reprogramming of CEIP money to be used to fund these grants. However, this must be approved by OMB and both the Senate and House Appropriations Committees. Mr. Chairman, I would now also like to provide for the record the Secretary's letter and the Department's comments.

Offshore oil spill fund

When I testified on December 7, 1978, I indicated NOAA's interest in assisting in implementing the Oil Spill Fund provision by having trustee responsibility for certain natural resources.

Under Section 303(b)(3), the President "as trustee for natural resources over which the Federal Government has sovereign rights or exercises exclusive management authority" may assert claim for funds which shall be "available for use to restore, rehabilitate, or acquire the equivalent of such natural resources. Under Executive Order 12123, published in the Federal Register on February 28, 1979, NOAA is delegated the authority of the President to assert claims for resources subject to its jurisdiction. To implement this responsibility, the Office of Resource Coordination and Assessment in the Office of Coastal Zone Management has begun exploring the legal and institutional elements of this activity and has prepared comments, which were submitted by NOAA on the Coast on the Coast Guard's regulations for the administration of the oil spill pollution fund. Measuring the value of natural resources damaged or destroyed by activities under the fund's jurisdiction is a complex and difficult one, but the full implementation of this trusteeship responsibility is vital to the long run wellbeing of our marine environment.

The fishermen's contingency fund

As you may know, we have held a series of workshops on implementation of title IV of the OCS Amendments, which establishes a Fishermen's Contingency Fund. Four workshops were held: In New Orleans, Louisiana, on February 9; in Boston, Massachusetts, on February 13, in Anchorage, Alaska, on February 21; and in Los Angeles, California, on February 23.

Prior to these workshops, we published an "advance notice of proposed rulemaking in the Federal Register, describing the issues that we thought would be addressed. Fishermen, oil and gas industry representatives, state governments, and interested citizens all presented testimony and other information at the workshops. We now have a clearer understanding of the various points of view, and we are attempting to resolve them as quickly as possible and to issue proposed regulations for the Fund. We agree with Congressman Breaux, as detailed in his letter to the Administrator, that whenever possible, the regulations should be clear, concise, and understandable to the fisherman.

I would like to highlight a view of the issues raised and discussed at these workshops and that effects we are making to resolve conflicting interpretations of the legislative changes. Perhaps the greatest concern to the fisherman at the hearing is the placing of the burden of proof on a claimant to show OCS-related damages. Under the OCS Amendments, only damages resulting from OCS exploration, development and production are eligible for recovery from the Fund. Title IV also provides that the fisherman is to show that the injury to his gear or vessel is OCS related. On the other hand the Fund provides that there is to be a presumption in favor of recovery if the fishermen can show: (1) That his vessel was being used for fishing in an area affected by OCS activities; (2) that he made a prompt (5 days) report on the location of the item causing the damage, and the nature of the damage; (3) that there was no record on charts or in a Notice to Mariners that the item causing the damages was listed in such area; and (4) that there was no proper surface marker or buoy attached to the item causing the damage.

At the workshops, fishermen argued that forcing them to meet strict burden of proof requirements would cause extensive delays because of the need to investigate the causes of the damage and also would result in great costs because of the need to hire expert divers and other personnel to positively identify a submerged object. Oil company representatives, on the other hand, used a strict burden of proof so as to avoid unjustified claims and awards.

We are presently exploring alternatives to resolve the burden of proof problem to resolve some of these conflicting concerns.

Another issue raised at the workshops was the need for NOAA services to fishermen in handling and processing claims. We believe the ideal situation would be to have a NOAA employee, from the National Marine Fisheries Service, available locally to help the fishermen prepare, file and process claims either against the Fund. However, program budgetary and personnel constraints may preclude our providing such an employee. If an employee is available, we would concentrate our efforts in the Gulf area, because most OCS exploration and development activities are presently located in the Gulf of Mexico. However, as activities increased in other OCS areas, it may be possible to supply additional personnel, for the Atlantic, Pacific, or Alaska areas.

Another issue raised at the workshop was the number of area accounts. After preliminary analysis, we believe at the present time that there should be a number of area accounts in the Gulf of Mexico—again because there is substantial activity occurring there now. We also believe that there should now be at least one account for the Atlantic and one account for the Pacific. Again, as activities increase, and the possibility of claims also increases, it might be appropriate to increase the number of area accounts in these areas.

One problem that was easily resolved was the necessity for a fisherman to report his damage within five days of occurrence or knowledge. Some fishermen indicated that requiring them to return to shore to report such damage would interfere with their fishing activities. A consensus was developed that the five-day report required to gain the statutory presumption of validity could be made by radio telephone with a written confirmation as soon as possible thereafter.

One possible means to eliminate regulatory burden, hearings, and costs on the fishermen and the oil industry would be to establish a process for "out-of-court" settlements. Unfortunately, the OCS Lands Act Amendments are basically silent on this possibility. We believe it might be appropriate that the hearing examiner or administrative law judge have the discretion to resolve matters, through pre-hearing settlements, between fishermen, oil and gas representatives, and/or the Fund. We are exploring this possibility.

Another problem is the enforceability of a finding by the administrative law judge that a particular oil company is responsible for the damage. It is not clear whether Title IV allows the Fund, or a fisherman, to secure payment from the owner of an obstruction once there has been a determination by the administrative law judge that the owner is responsible for damage to the fisherman's gear or vessel. We are presently exploring how such a finding by the administrative law judge could be enforced—either through further administrative proceedings, or federal court action.

Of course, there are other, more minor, issues to be resolved, but I am confident that these and the more substantive issues will in fact be resolved and that implementation of Title IV will be timely made. I would like to thank the Members of the Committee who helped us set up these workshops and who participated, with their staffs, in highlighting the concerns of the fishermen, industry, and state and local governments.

This concludes my remarks and of course, I would be glad to answer any questions.

STATEMENT OF BASIL WHITING, DEPUTY ASSISTANT SECRETARY FOR OCCUPATIONAL SAFETY AND HEALTH

Mr. Chairman (and members of the Select Committee): I am pleased to be here today to assist your oversight activities with respect to the implementation of the Outer Continental Shelf Lands Act Amendments of 1978. I can inform you that OSHA has made considerable progress in carrying out the tasks the amendments have assigned to it.

In my testimony before this committee on December 7 of last year, I discussed two areas where OSHA would be making contributions to the implementation of the amendments. The first area is our role in aiding the two studies which examine the adequacy of existing safety and health regulations on the OCS. At the time of my last testimony, we had sent to the heads of the appropriate agencies and departments our recommendations for what the 21(e) study of diving regulations should include. Since then, our technical representative has been actively involved in the interagency committee coordinating the 21(e) study. On the whole we have been pleased with the responses of the Departments of Commerce and Transportation to our recommendations. The committee has thus far incorporated virtually all the projects designed to reveal methods for increasing the level of health and safety divers can be afforded. We are confident that the 21(e) study will make a valuable contribution to the health and safety of divers on the OCS.

The second area where OSHA is making contributions to the OCS effort is in clarifying its working relations with the Coast Guard. I reported in December that work has begun on a Memorandum of Understanding concerning OCS jurisdiction. Further discussions between OSHA and Coast Guard staffs have produced a new draft which better reflects the statutory authorities of the two agencies. We at OSHA are in the process of preparing what we hope will be our final staff comments on the MOU. There are still some technical issues to be discussed and resolved. We hope to clear these matters up quickly so that the MOU can be signed.

In addition to working out the MOU, OSHA is taking steps to bring consistency to the regulations affecting health and safety on the OCS. In the near future, OSHA

will publish proposed rules incorporating into our diving standard certain provisions from Coast Guard's standard dealing with equipment performance and design. This is an area which our original standard does not regulate. Using Coast Guard's equipment regulations as a model for our own will result in greater uniformity between the standards.

In conclusion, Mr. Chairman, we at OSHA are quite pleased with the cooperation we have received from the Coast Guard and the other agencies involed in implementing the OCS Land Act Amendments. The advice we have given has been well received and seriously considered; our discussions with Coast Guard on jurisdictional issues have been devoted to finding the best way of accommodating the two agencies' authorities; and we expect to resolve the differences between the OSHA and Coast Guard diving standards through frank discussions of the technical matters in questions and joint solicitation of the opinions and knowledge of experts outside of the government. I would now be pleased to respond to any questions you may have.

U.S. DEPARTMENT OF LABOR,
OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION,
Washington, D.C., March 14, 1979.

Hon. JOHN MURPHY,
*Chairman, Ad Hoc Committee on the Outer Continental Shelf,
House of Representatives, Washington, D.C.*

DEAR MR. CHAIRMAN: In the March 8 hearings held by the Ad Hoc Committee on the Outer Continental Shelf, you requested that we bring you up to date on the Occupational Safety and Health Administration's investigation of the recent tragedy in the Gulf of Mexico. As you know, Penrod Company's Rig 30 caught fire March 5. Five companies are involved with the rig: Penrod, Placid Oil Company, General Marine Caterers, Dialogue Company, and Tri-state Oil Company. Eight people have died, six Penrod employees and one each from Dialogue and Tri-state.

The on-site part of our investigation has been completed. Penrod granted us access to the rig; the Geological Survey provided our inspectors with transportation to and from the rig. In conducting the on-site investigation, we worked closely with both the Geological Survey and the Coast Guard.

Our investigation on shore has not gone so smoothly. Penrod has advised its employees through its attorney not to cooperate with our investigation, and we have thus far been unable to obtain statements from any employees. We will take all steps necessary to secure employee statements on the disaster. The Coast Guard convened its investigatory hearings March 12, and we are observing those hearings.

At the moment, we have no information on the cause of the explosion or possible violations of OSHA standards. When such information is available for release, we will be sure to inform you.

Sincerely,

BASIL J. WHITING,
Deputy Assistant Secretary.

STATEMENT OF R. DOBIE LANGENKAMP, DEPUTY ASSISTANT SECRETARY, RESOURCE
APPLICATIONS, DEPARTMENT OF ENERGY

I appreciate the opportunity to appear before this Select Committee to discuss Outer Continental Shelf issues. In December 1978 we testified before this Committee and at that time discussed the functions that were transferred to the Department of Energy (DOE) from the Department of the Interior (DOI) under the DOE Organization Act. We also outlined the status of our regulations and the studies then under way. I would like to take this opportunity to bring you up to date on our activities as they relate to the Outer Continental Shelf.

We have just completed and forwarded to DOI for their review a report to Congress with respect to OCS bidding systems. In the report, we provide an analysis of the bidding systems used during the fiscal year 1978 and systems expected to be used for lease sales in fiscal year 1979. This report is in compliance with section 205(a) of the OCS Lands Act Amendments of 1978, which specifies that within six months after the end of each fiscal year the report is to be submitted by the Secretary of Energy.

Although the OCS Amendments Act became law less than one month before the end of FY 1978, we are submitting the report for fiscal year 1978 to indicate what action was taken on new bidding systems during the year. It was during this period

that the sliding scale royalty system was introduced. This system, which has not been used in five OCS lease sales, was discussed in our December 1978 testimony.

Regulations

We have completed the first phase of drafting regulations for bidding systems authorized by the OCS Lands Act Amendments. The systems included are the cash bonus, royalty bid and the sliding scale royalty bidding. These regulations have been forwarded to DOI for their review.

We have also completed drafting a regulation to establish a cash bonus bid/fixed profit share bidding system as authorized by the OCS Lands Act Amendments. This regulation has required extensive economic analysis and a thorough investigation of accounting approaches and procedures. It was forwarded to DOI last week for the informal consultation as required by the DOE Organization Act.

A third regulation has been completed which will permit a modification of the current Outer Continental Shelf (OCS) lease bidding process to permit sequential bidding, i.e., the tracts offered for lease will be separated into groups and offered for sale at separate time-periods (no less than one day apart) instead of all at once as is now the practice. This leasing approach will enable bidders to concentrate financial resources on a smaller number of tracts and to adjust bidding strategy between each bidding period.

We have also completed a regulation for the taking and disposition of Federal royalty oil. The regulation applies to both the OCS and onshore leases and provides for the sale of royalty oil to eligible refiners and the public. This regulation has been reviewed by DOI and is now being prepared for proposed rulemaking.

It is our belief these regulations will foster competition for OCS leases by establishing bidding systems and bidding processes that should either reduce the case bonus or enable companies with budget constraints to bid on more tracts per OCS lease sale.

Production goals

The DOE has just completed a draft study on production goals for the OCS. These goals were developed in accordance with the Memorandum of Understanding (MOU) between DOE and DOI signed in September 1978. The MOU directs DOE to establish energy production goals on a resource by resource basis with projections horizons of five, ten and fifteen years in the future.

The OCS production goals were developed to guide DOI in preparing the five-year leasing program specified in the OCS Lands Act Amendments. The goals project the level of production that may be expected in the years 1985, 1990, and 1995. These projections are based upon estimates of future production from existing leases, from lease sales currently scheduled to occur during the 1979-81 time period and from lease schedules that we have analyzed for the 1982-85 time period.

The analysis is based on data on resource estimates, and assumptions about the relationship between leased acreage and new field discoveries, resource prices and production costs. It was carried out by deriving sale schedules which were optimized in terms of economic value, alone. Production potential of unexplored OCS acreages continues to be uncertain. For example, estimates of OCS undiscovered recoverable resources by the U.S. Geological Survey and industry range from 26 to 36 billion barrels of oil and 101 to 115 trillion cubic feet of natural gas. In conducting its analysis, DOE used the statistical mean of Geological Survey estimates published in 1975, of 26 billion barrels of oil and 107 trillion cubic feet of gas. Again, it should be recognized that these resource estimates vary substantially from other sources both as to total magnitude and regional distribution. Other assumptions are shown at Table I.

Assuming average resource and yield values, Table II displays the production goal results at two price levels (\$18.50 and \$23.85 per barrel). Production from the current leasing schedule, ending in 1981, increases from 1985 to 1990 but decreases from 1990 to 1995. Maximum production from leases issued in the 1979-81 period occurs in 1991. For our 1982-85 schedules, associated production increases over all three production forecast periods, with maximum production occurring in 1994. The current schedule calls for five sales in 1979, four in 1980, and six in 1981. The results for the 1982-85 time period are based on an assumption of seven sales per year, a number which results from DOE's analysis of leasing constraints and administrative feasibility. In a moment, I will discuss our analysis of alternative sale frequencies.

On a daily basis, the seven sale per year assumption results in average production goals for oil at the \$23.85 price of .742, 1.671 and 1.759 million barrels in 1985, 1990 and 1995, respectively. The corresponding goals for natural gas at a \$4.50 per MCF price are 10.052, 8.880 and 5.277 billion cubic feet in 1985, 1990 and 1995, respectively. At the \$18.50 price these daily production figures are reduced to .742, 1.556 and

1.318 million barrels in 1985, 1990 and 1995, respectively. Comparable natural gas goals at a \$3.50 per MCF price level are 10.041, 8.704 and 5.151 billion cubic feet in 1985, 1990 and 1995, respectively (see table II).

Sensitivity analysis

While the production goals analysis assumes seven lease sales per year, an effort has been made to judge the sensitivity of oil and gas production from an optimized 1982-85 lease schedule to the number of lease sales. To accomplish this, lease schedules were derived assuming four, five and six sales per year as opposed to seven. Table III summarizes the key results of this analysis using seven sales per year at resource prices of \$23.85/bbl and \$4.50/MCF as a point of reference. Reducing the number of sales from seven to six per year but maintaining three sales per year in the Gulf of Mexico, results in two less sales in Alaska and in the Pacific. This causes projected oil production to fall by 14.8 percent and projected gas production to drop by less than 1 percent. This is as expected because of the high gas potential in the Gulf of Mexico. Lowering the frequency of Gulf sales from three to two per year reduces only the number of total Gulf sales (from 12 to 8). The result, then, is only a 4 percent decrease in oil production but a rather substantial 13 percent reduction in gas production. When only five sales per year are allowed and Gulf sales are again limited to two per year, the number of sales drops by four in the Gulf, two in the Pacific and two in Alaska. The net production impact of these changes is to decrease oil production by 17 percent and gas production by 14 percent. Further reducing the number of annual sales to four results in a 41 percent reduction in oil production and a 19 percent decline in gas production.

These results clearly demonstrate that reducing the number of Gulf sales from three to two per year and/or decreasing the number of sales from seven to six, five or four per year has a negative impact on the expected production of oil and/or natural gas.

In addition to the significance of the number of sales to further production, the amount of acreage offered for lease in each sale may be important. For DOE's analysis, it was assumed that for sales in the Gulf of Mexico and the Pacific 600,000 acres would be offered, those in the Atlantic 800,000 acres and in the frontier of Alaska 1,000,000 acres. Historical experience, as summarized in table IV, indicates that as the acreage offered increases, the percentage actually leased may decline. The amount actually leased has tended, on average, to be greater for sales with offerings of 600,000-800,000 acres than for 1,000,000 acres. Since production is linked to the amount of acreage evaluated by industry, sale size (particularly in non/frontier provinces) and sale frequency may both influence future production. We are continuing to study the apparent relationship of sale size to the amount of acreage leased in an effort to determine whether there is a connection between these elements.

Because of the uncertainty regarding many of the other assumptions incorporated in DOE's analysis, the economic value and production obtained from optimal lease schedules and the composition of these schedules were analyzed for their sensitivity to four resource price levels (\$14.50, \$18.50, \$23.85 and \$31 per barrel), three resource estimates (high, medium and low) for each area, three yield levels (high, medium and low) and two objective functions (maximize total economic value and maximize total production).

Increasing prices and resource estimates caused the economic value and production under all lease schedules to increase. However, both value and production were relatively insensitive to the choice of yield levels and objective functions. Switching from maximizing economic value to maximizing production caused an increase in production and a decrease in economic value which averaged less than 4 percent. Alterations in yield levels caused economic value and production to vary by less than 9 to 15 percent, respectively. Based on these findings, it was concluded that recommendations on production goals and the associated lease schedules would be based on maximizing economic value.

Sensitivity of lease schedules to resource prices, resource estimates and yield functions was also examined. Lease schedules resulting from DOE's analysis show that the distribution of sales over OCS regions (Atlantic, Pacific, Gulf of Mexico and Alaska) and individual OSC provinces is insensitive to variations in the yield level and to the overall level of resource estimates by province but sensitive to resource prices. As resource prices are increased, the percentage of sales allocated by the model to the Alaskan region increases while it decreases in the Atlantic region and, to some extent, in the Pacific region. The sensitivity of the 1982-85 lease schedules to price is most pronounced between the two intermediate price levels (\$18.50 and \$23.85).

Table I.—Key Variables Used to Establish OCS Energy Production Goals
Resource Levels (3):

Low: 50 percent of USGS mean conditional resource estimate.

Mean: USGS mean conditional resource estimate.

High: 200 percent USGS mean conditional resource estimate.

Price Levels (4):

	Oil landed (per barrel)	Natural gas (well head) (mcf)
Low	\$14.50	\$2.60
Medium low	18.50	3.50
Medium high	23.85	4.50
High	31.00	5.85

Hydrocarbon yield functions (3):

Low: 62 percent of resource discovered in the first 15 percent of acreage evaluated.

Medium: 76 percent of resource discovered in the first 15 percent of acreage evaluated.

High: 85 percent of resource discovered in the first 15 percent of acreage evaluated.

Objective function (2), maximize economic value and maximize production.

Acreage Offered per Sale (in acres):

Gulf of Mexico	600,000	Atlantic	800,000
Pacific	600,000	Alaska	1,000,000

The draft production goals have been sent to DOI and the Governors of the coastal states for comment. In June 1979, after comments are received and evaluated, a final report will be released.

This concludes my prepared statement. I will be pleased to answer any questions.

Relative Cost Factors:

	Exploration	Development	Operating
Gulf of Mexico, South Atlantic, South Pacific	1.0	1.0	1.0
Central Atlantic, North Pacific, Central Pacific	2.2	1.9	1.3
North Atlantic, Gulf of Alaska	2.4	2.8	1.6
Bering Sea, ¹ Beaufort Sea	5.0	3.7	1.9
Chukchi Sea	6.0	4.6	2.2

¹ Excludes Zhemchug—St. George

Sale constraints

Province: No more than three per year in central and western Gulf of Mexico; no more than one every other year in all other provinces.

Region: Gulf of Mexico and Atlantic—No more than three per year.

Pacific and Alaska—No more than two per year.

Nation: Seven per year.

TABLE II.—OCS OIL AND GAS PRODUCTION GOALS FOR 1985, 1990, AND 1995 ASSUMING MEAN RESOURCE AND YIELD LEVELS FOR THE MEDIUM LOW AND MEDIUM HIGH PRICE LEVELS

Source of production	Estimated 1977	Medium low price			Medium high price		
		1985	1990	1995	1985	1990	1995
Oil production: ¹							
Existing leases ²	304	257	198	97	257	198	97
Scheduled 1979 to 1981 ³	0	14	287	198	14	318	222
Expected 1982 to 1985 ⁴	0	0	86	186	0	94	323
Total.....	304	271	571	481	271	610	642
Gas production: ⁵							
Existing leases	3,737	3,543	2,365	1,186	3,543	2,364	1,186
Scheduled 1979 to 1981 ³	0	122	446	240	126	471	258
Expected 1982 to 1985 ⁴	0	0	367	454	0	377	482
Total.....	3,737	3,665	3,177	1,880	3,669	3,212	1,926

¹ Annual production in millions of barrels.² USGS most likely estimate.³ The current schedule provides for 5 sales in 1979, 4 in 1980, and 6 in 1981.⁴ Assuming 7 sales per year during the 1982-85 time period.⁵ Annual production in million of cubic feet.

TABLE III.—EXPECTED CUMULATIVE OIL AND GAS PRODUCTION ASSOCIATED WITH DIFFERENT 1982-85 OPTIMIZED LEASE SCHEDULES

(Annual sale frequencies)

	7, 3 GOM	6, 3 GOM	6, 2 GOM	5, 2 GOM	4, 2 GOM
Region:					
Gulf of Mexico (GOM)	12	12	8	8	8
Atlantic.....	4	4	4	4	4
Pacific.....	4	2	4	2	1
Alaska.....	8	6	8	6	3
Production:					
Oil level (million barrels)	2,729	2,325	2,612	2,225	1,169
Percent difference from 7 per year	0	-14.80	-4.29	-17.37	-40.67
Gas level (bcf)	4,768	4,739	4,142	4,111	3,872
Percent difference from 7 per year	0	-.98	-13.46	-14.10	-19.10
Production (daily) oil (thousand barrels):					
1985.....	0	0	0	0	0
1990.....	257.5	230.4	230.5	204.7	191.1
1995.....	884.9	752.6	859.4	744.2	534.5
Gas (millions of cubic feet):					
1985.....	0	0	0	0	0
1990.....	1.03	1.03	0.81	0.81	0.73
1995.....	1.32	1.31	1.22	1.22	1.12

TABLE IV.—OCS ACREAGE LEASED VERSUS ACREAGE OFFERED, 1967-78

Sale category (thousand acres)	Number of sales	Number of tracts	Acres leased	Acres offered	Percent leased
400 to 700	9	1,081	3,258,401	5,230,618	62
701 to 900	4	614	1,624,487	3,242,434	50
900 plus	11	2,993	5,160,220	15,257,813	34

STATEMENT OF BUD WALSH, DEPUTY ADMINISTRATOR, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, DEPARTMENT OF COMMERCE, ACCOMPANIED BY MARTIN H. BELSKY, COUNSEL, NOAA; AND BASIL WHITING, DEPUTY ASSISTANT SECRETARY, OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION, DEPARTMENT OF LABOR; AND R. DOBIE LANGENKAMP, DEPUTY ASSISTANT SECRETARY, OIL, NATURAL GAS AND SHALE RESOURCES, DEPARTMENT OF ENERGY, ACCOMPANIED BY ROBERT KALTER AND ROBERT LAWTON, DEPARTMENT OF ENERGY

Mr. WALSH. Thank you, Mr. Chairman.

I might mention for the record that I am accompanied at the table here today with representative of our Office of General Counsel, Mr. Martin H. Belsky.

Mr. STUDDS. Who?

Mr. HUGHES. We want to welcome Mr. Belsky back to the committee. He is an old face and I might add he was a good one here.

Mr. WALSH. Let me begin by saying that I once again am pleased to appear in this committee room. It is my third appearance in about 5 days.

I know that the chairman of the committee had personally invited the Secretary of Commerce to appear. Unfortunately, her schedule would not permit her to be here today and I have been asked to represent the Department of Commerce today.

I testified before this committee on December 7, 1978, and generally described how the OCS amendments affected the responsibilities of the National Oceanic and Atmospheric Administration and what we are doing to implement those responsibilities. Since that time, we have been attempting to comply with the requirements of the act and move diligently to put into place whatever regulations are required.

As you know, the changes in the OCS Lands Act amendments affect the Coastal Zone Management Act program, particularly as it relates to the coastal energy impact program. We have published proposed regulations to implement those changes which relate to the availability of funds, and the conditions under which funds are provided. These regulations have been in the Federal Register and have already been commented upon by various groups and individuals as well as the States.

We are approaching the phase in which we will put these regulations into final effect and that should be shortly.

One of the issues that has come up under the coastal energy impact program, which the chairman of the committee asked me to address quite specifically, relates to the provision on OCS State

participation grants. When I testified last December, I indicated that the President's budget had not yet been released and therefore I could provide no specific information with regard to whether that provision would be funded. I must inform the committee today that the budget request does not provide funds for the OCS grants.

The record will show that the National Oceanic and Atmospheric Administration did request these funds. The Department, however, decided not to forward that request to the Office of Management and Budget, and there is a letter that has been sent to the chairman from Andrew Manatos, who is the assistant secretary for Congressional Affairs, which has an attachment which describes the reasons for this budgetary decision.

I would direct your attention to that and I will briefly read the rationale.

Mr. HUGHES. Is that coming by regular mail, Mr. Walsh?

Mr. WALSH. It should be in the file. We have copies of that letter available. We made it available to the committee. It should be in the members' package, I am told.

Mr. HUGHES. We do not have a letter, but I am sure—it just arrived.

Mr. WALSH. The brief statement is included in your package, I understand, entitled:

Department of Commerce Discussion of Departmental Consideration of Outer Continental Shelf State participation Grants Funding for the House Ad Hoc Committee on the Outer Continental Shelf.

The rationale behind the low ranking was as follows: A 1979 supplemental could not be effectively utilized because funding would not be received until very late in the fiscal year, and because regulations and program operational requirements would not be in place in time to utilize the funds if available. Second, the 1980 amendment was not—that is the amendment for provision in the 1980 budget as opposed to a 1979 supplement—was not forwarded because of the need to support the President's policy of fiscal restraint, unanswered questions as to the States' financial needs and the possibility of reprogramming existing funds for the program. Third, large carryover balances exist in the Coastal Energy Impact fund appropriation, and use of these funds for the OCS State Participation Grant program could be an alternative to requesting new funding if assistance is required by the States in 1980.

In addition, Mr. Chairman, I would note the Secretary is presently reviewing a letter in response to a letter from the chairman regarding this provision.

Let me turn now to the second major part of our responsibilities under the OCS Lands Act amendment—the offshore oil spill fund. When I testified on December 7, 1978, we noted that we had an interest in implementing the oil spill provision relating to being trustee—having public trustee responsibility for natural resources. Just recently there was a notice in the Federal Register announcing Executive Order 12123 which delegates to NOAA power to assert claims for damages to natural resources subject to our jurisdiction.

Next, let me turn to the fishermen contingency fund. We have already undertaken a series of workshops to discuss with the fishermen the implementation of this provision. We held workshops in New Orleans, in Boston, in Anchorage, and in Los Angeles. Prior to these workshops, we decided to issue an advanced notice of proposed rulemaking to alert the fishermen to the issues that would be considered during those workshops.

I would point out, Mr. Chairman, that we are still in the early processes of rulemaking and as yet we have not reached or made any final policy decisions with regard to the issues that are raised. We realize that the committee would perhaps like a firmer idea of exactly how we are going to come out in this rulemaking process. I might mention that there are some issues that have been raised that are of concern to the fishermen. One of the issues is burden of proof. The burden of proof provision has become a problem because meeting it has been identified as potential difficulty for the fishermen. We realize that in the statute there is a provision relating to the burden of proof and to establishing a presumption.

Another issue raised by the fishermen is the handling and processing of claims. It has been suggested that the National Marine Fishery Service provide very active support in assisting the fishermen with regard to the preparation of the submission of claims. We, of course, are reviewing that in our program considerations. Budget and personnel must be taken into account in making our final decision.

Another issue raised is the area accounts. After preliminary analysis, we believe at the present time that there should be a number of area accounts in the Gulf of Mexico, and that there will be at least one account for the Atlantic and one account for the Pacific. Again, this is under consideration and we have made no final decision.

Another problem that we have identified is the necessity for a fisherman to report his damage, and some fishermen have said it is a burden in order to return to shore. We have suggested a possible solution to that problem also.

In addition, there are some issues with respect to out-of-court settlements, and the question of enforceability of a finding by the administrative law judge. We are at the present time evaluating our comments so that we might be prepared when and if, when we come to the decision points on these particular questions. We do anticipate that we will have regulations in place sometime in June.

That completes my statement, Mr. Chairman.

Mr. HUGHES. Thank you, Mr. Walsh.

If my colleagues are in accord, we will hear from the other panelists and then ask questions of the panel.

Mr. Whiting?

Mr. WHITING. Thank you, Mr. Chairman.

I testified last December and reviewed with the committee OSHA's progress in working with the other agencies that have safety and health responsibilities on the OCS.

In that testimony, I discussed mainly two areas of activity. The first activity was our role in aiding the two studies that are mandated in section 21 of the OCS legislation. The section 21(e) study concerns diving; the section 21(a) study calls for a review of the adequacy of safety and health regulations that affect operations on the OCS.

I noted last time that we had sent to the heads of the Departments of Commerce and Transportation our recommendations for what ought to be included in the diving study under section 21(e). Since then, our technical representative has been involved in the interagency committee set up to implement this study. On the

whole, we have been pleased with the response of the Departments of Commerce and Transportation to our recommendations. They have incorporated all the projects that we have suggested for methods of increasing safety and health for divers on the shelf.

Concerning the larger study mandated by section 21(a), we have designated Dr. Jerry Purswell, director of Safety Standards Development, to be our point of contact for the study. He has already been in touch with the Coast Guard on matters related to the study.

The second general activity is determining our relations with the Coast Guard vis-a-vis the applicability of standards to worksites on the Shelf and coordinating inspections and other investigations pursuant to those standards.

In December, I reported that we had begun work with the Coast Guard on a memorandum of understanding relating to the OCS. The committee may recall that I also indicated that this program to cooperate and coordinate with the Coast Guard in relation to the OCS was part of a much larger and longstanding effort of cooperation between OSHA and the Coast Guard. So we already had a basis upon which to build our relationship, and I can report that things are moving smoothly. We are pleased with the relationship with the Coast Guard, and we anticipate no serious problems in completing the memorandum of understanding.

We intend to continue to assist the Coast Guard in its process of adopting those of our standards applicable to OCS working conditions. The first of these projects is well along toward completion.

We also intend to take our own action to bring our diving standards into conformity with the Coast Guard's. We anticipate that the Coast Guard will also take action to change their diving standards. In this way, the industry will not feel that it is regulated by two different standards from two different locations.

Generally speaking, I think the modest but important role of OSHA in relation to these amendments is proceeding well. I would like to close with a specific subject that I know is of interest to Chairman Murphy, and that is the recent tragedy that occurred off the Gulf Coast 2 days ago.

There was an explosion and fire on a platform owned by Penrod Drilling Co. and leased by the Placid Oil Co. of Dallas. The explosion occurred at around 6 p.m.; the rig is about 45 miles off shore. There are now casualties totaling four known dead and four missing.

The fire continued for some time. I am told that as of last night the fire was out, but that flammable gases are still escaping and that the responsible corporations have engaged the well-known Red Adair to cap the well. Once the well is capped, the agencies concerned with investigating this tragedy can get onto the platform and conduct their investigations.

OSHA has already conducted an opening conference with the company. The company is willing to carry us out to the site. We have been in touch with the Coast Guard—the Coast Guard has asked our cooperation in this matter—and we have also been in touch with the Geological Survey. The compliance officer we have assigned to this case has experience in this type of operation.

This particular explosion shows the importance of the committee's concern with assuring the safety and health of workers on the OCS. These disasters do happen.

I also think that your continuing oversight has emphasized to the three agencies involved the need to coordinate their efforts. Once the final MOU with the Coast Guard is in place, the standards setting activities will continue apace.

Mr. HUGHES. Thank you, Mr. Whiting.

Mr. Langenkamp?

Mr. LANGENKAMP. Thank you, Mr. Chairman.

This is my first appearance before this committee and it is an honor to be here.

I have with me Robert Kalter and Bob Lawton of the Office of Leasing Policy Development, the Department of Energy.

Let me first say that speaking for the Department of Energy, we agree with the chairman's leasing summarization. We think that it is imperative that this committee and all of us at the table view the OCS situation in light of the current energy situation; and we are extremely concerned about the supply situation in this country, as has been indicated by Secretary Schlesinger on a number of occasions.

The Department of Energy, in connection with the act that we are considering today, has completed the first phase of drafting regulations for the bidding systems authorized by the Act. These systems include the cash bonus, the royalty bid and the sliding-scale royalty bidding. These regulations have been forwarded to the Department of the Interior for their review, and discussions are ongoing at this time.

We have also completed drafting of a regulation to establish a cash-bonus bid/fixed profit share bidding system which has also been transmitted to the Department of the Interior.

The third regulation has been completed which will permit a modification of the current Outer Continental Shelf lease bidding process to permit sequential bidding. The tracts offered for lease would be separated into groups and offered for sale at separate time periods, no less than one day apart, instead of all at once as is now the practice. This approach would enable bidders to concentrate financial resources on a smaller number of tracts and to adjust bidding strategy between each bidding period.

We have also completed a regulation for the taking and disposition of Federal royalty oil. In addition to these regulations which have been drafted by the Department of Energy, the Department of Energy has prepared and transmitted to pertinent Governors and to the Department of the Interior, the Department of Energy production goals for the OCS. Heather Ross, the Deputy Assistant Secretary of the Interior, made reference to these earlier.

These production goals were developed to guide the Department of the Interior, pursuant to an MOU, Memorandum of Understanding, that exists between the Department of the Interior and the Department of Energy. These goals were to guide the DOI in preparing the 5-year leasing program specified in the OCS Lands Act amendments. This was the leasing schedule that was also referred to earlier.

The production goals are lengthy; they are complex, but they have within them a number of interesting conclusions.

The subject has been raised by Mr. Forsythe, and by Mr. Hughes, and by others, regarding the capability of the industry to respond to an accelerated lease schedule. We would direct your attention in these production goals to the rather lengthy section that discusses the manpower, the materiel, aspects of the industry's capacity for responding to an accelerated lease schedule.

It is our conclusion that a seven-sale per year schedule is within the competency of industry and is within the ability of industry and also within the level of various possibilities regarding administrative constraints.

As the committee is aware, the current schedule calls for five sales in 1979; four in 1980 and six in 1981. We would then supplement this with the seven-sale per year schedule.

Another interesting aspect of the production goals is the difference in production that you get if you delete or add sales in the Gulf of Mexico. As the production goals would indicate, that by adding sales in the Gulf of Mexico, the ultimate recovery of gas would increase, vis-a-vis oil.

Mr. Chairman, I would submit our statement for the record and we are ready to answer any questions that you might have.

Mr. HUGHES. Without objection, your statement and the statement of Mr. Whiting and Mr. Walsh will be received for the record.

Mr. Studds?

Mr. STUDDS. Thank you very much, Mr. Chairman.

I have some questions with regard to the fishing gear fund for NOAA.

I must say that I am a bit disturbed, as I read the testimony and as I listened to some of what you said, but Mr. Treen and I were the original authors, as you probably know, of this title of the act. Mr. Belsky had considerable input; he was present at all times and, as a matter of fact, the Department of Commerce, as I recall, had a major hand in drafting the final compromise language. It is therefore particularly surprising to me to find the Department of Commerce has difficulty understanding the language.

Let me ask you, first of all, when will the proposed regulations be published?

Mr. WALSH. We have not established a date when they will be ready, but I understand that they are in the early process of being prepared.

Mr. STUDDS. I know they are in the process of being prepared—

Mr. WALSH. That means that we are still reviewing all of the input that we have gotten from the workshops and we are trying to cast that into the language necessary.

Mr. STUDDS. Could you even guess when they might be posted, the regulations published?

Mr. WALSH. I suspect it is within the next 3 weeks.

Mr. STUDDS. That is what I want to know. Generally within the next 3 weeks or so?

I understand that there has been some discussion with respect to the replacement value of the fishing gear. I understand that someone suggested somewhere—I can just imagine who—that depreciated replacement costs ought to be considered rather than actual

replacement value of gear losses. Is such a thing being discussed at all?

Mr. WALSH. Yes. That is one of the issues that has been raised.

Mr. STUDDS. By whom?

Mr. WALSH. I believe that the question has been raised by the oil and gas industry.

Mr. STUDDS. By the oil and gas industry? Marvelous.

Mr. Belsky, do you recall the consideration of this issue by the conference committee and the explicit rejection of it by the Congress, of the question of whether or not we would deal with depreciated replacement costs? I believe it was the Senator from Oklahoma that raised the question and I objected to any depreciated costs——

Mr. BELSKY. The phrase used in the conference committee was "actual value." That was the discussion, and the discussion was not on depreciated cost. That is correct.

Mr. STUDDS. I believe I recall the Senator from Oklahoma questioned me about used fishing gear. I remember taking a little umbrage in the suggestion that we would be dealing with used gear in the fleets up there, but the conference categorically rejected any such thing.

How could it possibly be considered an issue by the Department at this moment?

Mr. WALSH. Well, it was raised at the workshop.

Mr. STUDDS. I do not care if it was raised or not. This is the law, whether the oil industry likes it or not.

Does the oil industry have a right to suggest a revision of the law?

Mr. WALSH. Again, it is a matter of the interpretation of the words of the statute as well as the legislative history.

Mr. STUDDS. Excuse me one second.

Those are my words that you are interpreting.

Mr. WALSH. Yes. I realize that you are impatient with the regulatory process and you would like us to state categorically, right now, that we are this way or that way.

Mr. STUDDS. No. The Congress has stated categorically this way. You for many years were on the other side of this, I think I heard you previously testifying about people downtown telling you what you meant by what you wrote. Here is a classic example of this.

We wrote this. We made it explicitly clear what we meant and now you are discussing that you are going to interpret what we meant.

Mr. WALSH. The language of the statute is replacement value of the fishing gear with respect to the way the claim is filed.

Mr. STUDDS. I have it in front of me.

Where do you get "depreciated"?

Mr. WALSH. The question is whether it is actual or depreciated.

Mr. STUDDS. No. It says "replacement value."

Mr. WALSH. It says "replacement value," and if the words of the statute are clear, the statute is binding. If it is not clear, then we turn to the legislative history. It is clearly not clear on the face of the statute, and therefore we will turn to the legislative history and make an analysis.

Mr. STUDDS. I just offered you some of the legislative history. You are talking to the legislative history.

Mr. WALSH. I understand that. And I also have some understanding of how often that may not—in terms of strict legal interpretation—have gotten into the record in sufficient quantity as to show general agreement that that is the intent of Congress. We will research that. I understand that is the case that we had with many statutes and I feel that, while we sit down and talk these things over, often they do not get into the statute and therefore, based on the legal rules of interpretation, this is a question. I am only raising it as an issue. I do not necessarily disagree with you.

Mr. STUDDS. Fortunately for you, your very own counsel, sitting beside you, was chief counsel of the committee and confirmed what I told you. How much more research do you need?

Mr. WALSH. Well, I realize that—I do not want to make a firm and final decision until such time as we have had the regulatory process completed.

Mr. STUDDS. No. I certainly would not want to rush you into anything. Maybe we have a little more history that can help you. I hate to think how many lawyers and how much this will cost in this.

Mr. WALSH. Hopefully, it will not be too long.

Mr. STUDDS. I trust there is nothing else that the oil industry is upset about in the law; we would make an effort to interpret it if there is.

The next thing that disturbs me, there has been discussion in your statement—and you may have skipped over it——

Do you propose to establish only one area account for the Atlantic and one for the Pacific?

Mr. WALSH. What we are requesting from the Congress is a supplemental appropriation for this fund of \$600,000. We must distribute that around the various areas, but what we have stated that, given the present level of oil and gas activity in an area, that that is the place where we will probably put the principal amounts of money in accounts. It does not mean that next year, when we get more funds, we will not open up other accounts. This is only our initial estimate of where we plan to put the money.

Mr. STUDDS. Let me repeat the question.

Are you planning just one in the Atlantic and one in the Pacific?

Mr. WALSH. At the present time, we are, perhaps one in the Atlantic and one in the Pacific.

Mr. STUDDS. I find that incredible. Obviously, the intention of the Congress was to establish area accounts so that permanent resident leaseholders whose equipment is responsible for the damage, would be those contributing to the fund. I cannot believe that you are suggesting that an oil company, operating, say, in the Baltimore Canyon, is going to consider themselves responsible for damages by someone in George's Bank, totally different leaseholder.

Mr. WALSH. As I understand it, this is merely a projection of where we think likely damages are going to accrue. It does not have any effect on whether people get their money or not. It is an Administrative decision where we will locate accounts. Those responsible people will be liable wherever the account is located.

Mr. STUDDS. You are going to have the wrong people liable, quite possibly.

Mr. WALSH. It may turn out that we will get a lot more damage in the Pacific and it may turn out——

Mr. STUDDS. That is not what I mean. Within the area.

If I am operating in Alaska and I do not have any operations in Santa Barbara, why am I liable for it? That is what you are proposing.

Mr. WALSH. Well, as I understand the statute, the assessment is one issue; that is to say, someone will be held liable, and the second issue is what accounts are set to get the money out? That does not mean that money will not be available if there is no account in a particular plan. We are just making the guess as to where damage is likely to be. If circumstances prove it is different, then we will move our accounts around, but it certainly does not affect whether somebody is assessed for being liable. It is just an administrative guess as to where it is likely to come.

Mr. STUDDS. Obviously, there is going to be trouble on all three coasts.

Mr. WALSH. We just have to make some planning decision.

Mr. STUDDS. One in the Atlantic and one in the Pacific? And how many in the gulf?

Mr. WALSH. We estimate probably five area accounts which are divided by the Geological Survey District in the gulf.

Mr. STUDDS. Five in the gulf?

Mr. WALSH. Yes.

Mr. STUDDS. I gather that you are considering, from your testimony, a mechanism to consider cases that are obvious in their merit in a way which would speed up the long hearing process?

Mr. WALSH. That is right.

Mr. STUDDS. The question of the burden of proof disturbs me.

As I read the statute—I will refrain for a moment in saying that we wrote the statute. Section 404 sets forth four criteria for the burden of proof. It reads, "With respect to any claim for damages filed pursuant to this title, there shall be,"—not "there may be"—or the Department of Commerce may contemplate as to whether there ought to be, or whether the industry would approve of it—"there shall be," this is the law, a presumption that such claim is valid if the complaint establishes that one, two, three, four criteria."

You devote three pages of your testimony as to what additional criteria there may be. I do not understand that.

Mr. WALSH. First, let me start by addressing the provision that relates to the burden of proof.

While it is clear that once a fisherman has established these four criteria, there is a presumption which automatically attaches to his claim. It is also true that within those provisions, there are certain factual determinations that are required.

For example, under item 2, which is probably the one of most concern here, a report on the location of the equipment, tool container, or other item. Now, how close must the location be? Within a square mile, 10 miles? The path in which he had fished for the last 2 days? In addition, it speaks about the location of the materi-

al, equipment, tools, container, or other item. Does that mean that he has to tell what item it is?

Mr. STUDDS. No. It does not say "identification." It says "location."

Mr. WALSH. Location. It seems to say that there is something else as well as the location.

Mr. STUDDS. It does not say something else as well as the location. It says the location of—it is remarkably clear English, even for the Congress, I would suggest. Let me read from your testimony.

"Oil company representatives on the other hand use a strict burden of proof."

I do not care what they use. This is what the law says.

Mr. WALSH. But the question is, does the fisherman have to show it was at that longitude or this latitude or this location? He has a problem because he has certain gear, LORAN C, which is not effective in positioning himself within a mile. So we are trying to resolve these factual questions.

We do not wish to go against the intent of Congress.

Mr. STUDDS. Somebody is trying hard.

Mr. WALSH. As I say, these are workshops in which issues were raised.

Mr. STUDDS. Fair enough.

Mr. WALSH. We have not yet resolved those issues. It is quite likely that we will agree with you in our ultimate outcome, but you have to remember that we are out in the field raising issues in advance of the notice of preliminary rulemaking. When the proposed rules are completed, it then comes up through our system. I review them and at that point the policy decision issues and questions will be raised. They have not been raised to that level yet, and I do not want people out in the field making final determinations on this as yet, and we have not had enough time to really assess and evaluate every question that has come up so that I can make a decision on this witness stand.

Mr. STUDDS. You say "We are presently resolving alternatives to the burden-of-proof problem."

What problem?

Mr. WALSH. We have a problem if the fishermen are unable to prove those four points.

Mr. STUDDS. There is nothing to be proved.

Mr. WALSH. If he does not establish the elements of the presumption, there may be questions. He may of course still make a claim.

Mr. STUDDS. Are you talking only about situations in which a fisherman is unable to establish the four criteria of burden of proof?

Mr. WALSH. That is so generally, yes.

Mr. STUDDS. Why did you not say so? That is totally different. Your testimony suggests in all cases you have a burden of proof.

Mr. WALSH. My testimony is quite vague because I do not want to make a decision and prejudice the outcome of the regulatory process.

Mr. STUDDS. You used to speak simply and straightforwardly.

Mr. WALSH. They really ruined my mind. It was so much simpler before.

Mr. STUDDS. Let me make sure that I can understand what you just sort of said.

Do I understand you to say that with respect to those situations in which a fisherman is able to establish the four criteria provided for in the statute, burden of proof, that there is no problem? The only question that arises is where a fisherman is unable to establish those four, but still wishes to establish a claim?

Mr. WALSH. That seems to be the question that the statute raises. It talks about situations in which there is a presumption. It does not talk about situations where there is no presumption present. But in theory, it provides for compensation as well.

Mr. STUDDS. Is that a guess?

Mr. WALSH. That is a guess. I like to be clear on the record.

Mr. STUDDS. I appreciate it. I am so stunned that I do not know what to say. I appreciate that.

I must say I have to agree with you also that your testimony is vague.

Mr. WALSH. Honesty is the best policy.

Mr. STUDDS. Yes, and there is not much precedent for that, I agree with you. You know what Mark Twain said? Always do right. This will gratify some people and astonish the rest.

I appreciate that.

Mr. WALSH. I am learning every time I come before this committee, especially for you.

Mr. STUDDS. Well, thank you. You ought to get out of there. It is doing things to your thinking. It is not healthy at all.

Is there anything else that you could do or say that would make us feel any better or should I stop immediately?

Mr. Belsky, would you like to answer that question?

Mr. WALSH. One other thing that has been raised—Congressman Breaux has written us a letter with regard to the question of whether regulations and material on this should be written for the Harvard Law School graduate or the fishermen.

Mr. STUDDS. The more intelligent Harvard Law School graduates are becoming fishermen.

Mr. WALSH. I understand. Maybe that is what we should do. Crab fishing in Alaska looks very good now.

We are preparing as much material as we can so that the fisherman has the simplest, most direct method for making claims and the best understanding of how he must go about obtaining compensation if he indeed observes it under the act.

Mr. STUDDS. I agree with Congressman Breaux on that point. Thank you very much. Thank you for your patience, Mr. Chairman. I apologize for imposing such a long time.

Mr. HUGHES. Thank you, Mr. Studds.

Mr. Forsythe?

Mr. FORSYTHE. Thank you, Mr. Chairman.

Bud, I am going to pose a couple of questions that Mr. Treen wanted responses from you on. Mr. Treen asked that I question you concerning section 21(e) which gives NOAA responsibilities for studying underwater diving techniques. He has been told that NOAA has developed a plan of study after seven meetings here in Washington.

He would like to know who was consulted in developing the plan of study? Were representatives of the diving industry asked to submit suggestions for problem areas to be studied? What statistical bases did NOAA use in determining the subject matter to be addressed in the study?

Mr. WALSH. If I might, could I answer that for the record, Mr. Forsythe?

Mr. FORSYTHE. Sure, fine.

[The following was received for the record:]



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Washington, D.C. 20230

OFFICE OF THE ADMINISTRATOR

April 12, 1979

Honorable John M. Murphy
U.S. House of Representatives
Washington, D.C. 20515

Dear Chairman Murphy:

Thank you for your letter of April 5, asking that the National Oceanic and Atmospheric Administration (NOAA) respond to the comments made by Mr. Kenneth W. Wallace on behalf of the Association of Diving Contractors regarding NOAA's implementation of section 21(e) of Outer Continental Shelf Lands Act Amendments.

NOAA's diving program was begun in 1971. It was designed specifically to serve NOAA's needs rather than those of non-federal and commercial divers, and it has been oriented almost exclusively toward protecting the health and safety of NOAA divers and improving their effectiveness in support of NOAA's marine science and technical objectives. Since its inception, funding for the diving program has averaged about \$250,000 a year, including salaries, overhead expenses, equipment purchases, facilities, and research.

Although the amount of money spent on diving research as such has been small, data obtained from some of these efforts, such as research related to vertical excursions during a saturation dive, have been of value to American commercial diving companies operating in the North Sea. In addition, the NOAA Diving Manual, published in 1975, currently is used as a text in commercial diving schools.

About 400 divers have been certified under the NOAA program. At any given time, approximately half are actively engaged in diving operations in support of fisheries research and development, oceanography, ship maintenance and repair, and marine ecological studies. NOAA divers make approximately 6,000 dives each year. The total record includes about 40,000 dives since 1971.

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In addition, NOAA has managed programs involving approximately 3,000 person/days of saturation diving since 1972, and many advanced diving programs involving lockout submersibles, one atmosphere submersibles, and undersea habitats. During this experience there have been two fatal accidents. We are continually tightening our regulations to make our program the safest possible.

With the passage of the OCS Lands Act Amendment of 1978, NOAA was mandated, in section 21(e), to conduct studies of underwater diving techniques and equipment suitable for protection of human safety and improvement of diver performance beyond the then-existing NOAA program. We have begun that effort and are seeking to carry out the Congressional mandate.

Congress and NOAA are fully aware that extensive diving research has already been conducted, primarily by the Navy and the National Institutes of Health. Thus, these agencies, as well as the U.S. Coast Guard, were included as members of NOAA's planning committee for section 21(e). In addition, we are striving to develop a close working relationship with the diving industry. In this way, we hope to avoid duplicating work which has already been completed or is underway, and to facilitate the application of results from existing research to operational requirements. New research will be undertaken only as important deficiencies are identified.

NOAA is addressing its responsibility under section 21(e) by preparing a program development plan. Early in this process, on November 22, 1978, representatives of NOAA, Coast Guard, and the National Institute of Safety and Health met with Mr. James Eberle, the federal agency affairs representative of the Association of Diving Contractors, to explain that NOAA would prepare a preliminary draft plan which would be made available to industry for review and comment. A second presentation describing the approach being taken and the opportunity for industry comment was made on February 5, 1979, at the annual meeting of the Association of Diving Contractors. More than 500 people attended the presentation.

NOAA staff completed a preliminary working draft plan on January 22, 1979, and that working draft had been circulated to other federal agencies for review at the time of your oversight hearing on March 14, 1979. The review had not been completed and changes requested by other federal agencies had not yet been incorporated.

-3-

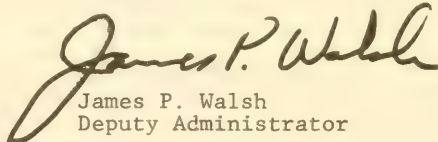
From the beginning of this process it has been NOAA's intention to seek comments and recommendations from the diving industry. This intent is clearly stated in the preliminary working draft and in the cover letter which transmitted the working draft to federal reviewers. A copy of the cover letter is attached.

We expect revision of this first working draft to be completed this month. At that time, the availability of the working draft will be announced in the Federal Register and about 400 copies will be distributed to the commercial diving industry and other interested parties to solicit their input. A copy of this working draft will also be made available to you at that time. In addition, an open forum is scheduled on May 29, 1979, to discuss the working draft and any changes which may be recommended by industry. At that time, industry representatives will be encouraged to assist in the preparation of a final program development plan.

In closing, Mr. Chairman, I should note that NOAA has no regulatory authority over commercial diving. We have been directed by Congress to study certain areas of diving that might benefit from government research and development. We earnestly desire to work with the diving industry, to avoid duplication of effort, and to carry out Congressional intent.

If we can be of any further assistance in this matter, please let me know.

Sincerely,

A handwritten signature in dark ink, reading "James P. Walsh". The signature is fluid and cursive, with the first name "James" and last name "Walsh" clearly legible. The middle initial "P." is smaller and less distinct. The signature is written over the typed name and title.

James P. Walsh
Deputy Administrator

Attachment



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Rockville, Maryland 20852

DRAFT

January 22, 1979

TO: Federal agency reviewers of the draft Program Development Plan for Studies of Underwater Diving Techniques and Equipment Suitable for Protection of Human Safety and Improvement of Diver Performance

This draft plan has been prepared by NOAA with continued guidance and assistance of representatives from NIOSH, Coast Guard and the Navy. Please regard it as a draft! Your comments and criticisms are earnestly sought so that the resulting program will be as responsive as possible to the needs of the offshore diving industry. Obviously, however, the results and gains to be made from this program will be beneficial to all segments of the diving community.

I call your attention to the schedule on page 20. As shown, it is requested that you complete your review by February 16, at which time we will meet in this room at 0900 so you will have the chance to submit your written comments and to further discuss the program.

The modified plan (based on your review) will be made available to the private sector in early March to permit interested individuals and organizations to comment. You will, of course, receive copies prior to its release.

An open forum (symposia) will be held on May 11 to afford the opportunity for members of the private sector to submit their comments and discuss the program.

The participation of the private sector in the development of this plan is considered to be absolutely critical. Priorities will be established, the management plan expanded, and budgetary information prepared following the public forum on May 11.

The OCS Act presents an opportunity to improve the already significant cooperation among the various segments of the national diving community. Your assistance will be greatly appreciated.

James W. Miller
James W. Miller



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Washington, D.C. 20230

OFFICE OF THE ADMINISTRATOR

May 3, 1979

Honorable John M. Murphy
U.S. House of Representatives
Washington, D.C. 20515

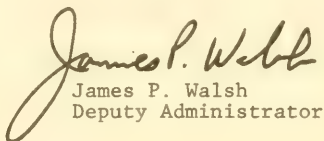
Dear Chairman Murphy:

In my letter to you on April 12 discussing NOAA's implementation of section 21(e) of the Outer Continental Shelf Lands Act Amendments I advised you that a working draft of a preliminary program development plan would be available soon. This document is now available and was announced in the Federal Register on April 26. I am enclosing a copy for your information.

As noted in the cover letter which accompanies the draft, comments are being sought from all concerned persons in the diving community. To facilitate communication between the Federal Government and the private sector, a public forum will be held May 29 to receive written and/or oral comments on the draft. The forum is scheduled to immediately precede the annual meeting of the Undersea Medical Society in Key Biscayne, Florida. Following the meetings, an ad hoc advisory group of government and non-government representatives will be assembled to assist NOAA in preparation of the final program development plan.

If I can provide any additional information, please let me know.

Sincerely,


James P. Walsh
Deputy Administrator

Enclosure

[From the Federal Register, Vol. 44, No. 82, Thursday, Apr. 26, 1979, Notices]

OUTER CONTINENTAL SHELF DIVER RESEARCH PROGRAM; AVAILABILITY AT DRAFT
PLAN

Agency: National Oceanic and Atmospheric Administration/Commerce.

Action: Notice of availability of the draft plan for the Outer Continental Shelf Diver Research Program. Notice of a public forum to receive comments and review the above plan.

Summary: In response to the recently passed Outer Continental Shelf (OCS) Lands Act Amendments of 1978 Section 21(e), a preliminary draft of a diver research program plan has been developed by NOAA with the assistance of other federal agencies. To ensure that this program is responsive to the needs of the OCS diving industry, comments from the private sector are being sought.

Date: The public forum will be held on May 29, 1979 at the Key Biscayne Hotel and Villas, Key Biscayne, Florida. The meeting will take place in the Santa Marta Room from 9:00 a.m. to 4:00 p.m.

Addresses: Copies of the draft Diver Research Program Plan and further information about the public forum, can be obtained by contacting Dr. James W. Miller, Deputy Director, Manned Undersea Science and Technology, Office of Ocean Engineering, NOAA, 6010 Executive Boulevard, Rockville, MD 20852, Phone (301) 4430-8391.

Supplementary Information: It is considered essential that representatives from the national diving community participate in the development of this program. Interested parties are encouraged to obtain copies of the draft plan and to attend the public forum on May 29.

JAMES W. MILLER,
Deputy Director, Manned Undersea Science and Technology.

[FR Doc. 79-12840 Filed 4-25-79; 8:45 am] Billing Code 3510-12-M



bol S.
UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Rockville, Maryland 20852

April 26, 1979

To Whom It May Concern:

On September 18, 1978, the Outer Continental Shelf Lands Act Amendments of 1978 was signed into law as Public Law 95-372. Section 21(e) of Section 208 of Title II of this Act tasks the Secretary of Commerce with the responsibility to "conduct studies of underwater diving techniques and equipment suitable for protection of human safety and improvement of diver performance." This responsibility was assigned to NOAA by the Secretary of Commerce on February 13, 1979. In order to fulfill this responsibility, NOAA, with the assistance of representatives of seven other Federal agencies, has prepared the attached preliminary draft of a plan which identifies suggested areas of study. No decisions have been made as to the final content of the program at this time.

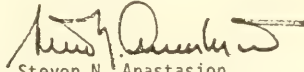
Prior to making any final programmatic decisions, it is essential that comments and advice be received; not only from the academic community and private industry but from all concerned entities, to ensure that studies undertaken will contribute to improvements in human safety and the performance of divers involved in offshore diving in the Outer Continental Shelf regions. Accordingly, comments on this draft plan are being sought from all concerned persons in the diving community. In particular, comments are encouraged with respect to the general objectives and research and development programs cited. Responses should identify important requirements which are not addressed as well as commenting on those that are. Suggestions pertaining to the relative priority of programs, those cited as well as recommended new studies, will be welcomed. The studies which become part of the final plan will be prioritized based on the needs of the diving community.

To facilitate communication between the Federal Government and the private sector, a public forum will be held on May 29, 1979, at which time interested persons may attend for the purpose of submitting written and/or oral comments on this draft plan. The meeting will take place from 9 a.m. to 4 p.m. in the Santa Marta Room, Key Biscayne Hotel and Villas, Key Biscayne, Florida. This 1-day meeting immediately precedes the Annual Meeting of the Undersea Medical Society which has set aside half of the first day (May 30) to address "Challenges of Modern Commercial Diving."

An ad hoc advisory group will be established subsequent to this meeting, composed of representatives of both Federal and non-Federal organizations, to assist in the preparation of the final program plan. The final plan will be used as the basis for obtaining program and budget support. NOAA views the tasks assigned in Section 21(e) of the Act as an opportunity for a collaborative effort between the Federal Government and the private sector to further improve our ability to obtain energy resources from the ocean. The assistance and expertise of individuals in the private sector is regarded as a critical element in the development of this program to ensure that it will be responsive to the need to protect human safety and improve diver performance in OCS diving. Your help will be appreciated.

All correspondence and comments should be forwarded to
Dr. James W. Miller, Deputy Director, Manned Undersea Science & Technology,
Office of Ocean Engineering, NOAA - OE3, 6010 Executive Blvd, Rockville,
MD 20852, or presented at the Miami meeting on May 29.

Sincerely,

A handwritten signature in dark ink, appearing to read "Steven N. Anastasion", with a stylized flourish at the end.

Steven N. Anastasion
Director, Office of Ocean Engineering

April 16, 1979

PRELIMINARY PROGRAM DEVELOPMENT PLAN
for
Studies of Underwater Diving Techniques and Equipment
Suitable for Protection of Human Safety and
Improvement of Diving Performance

Outer Continental Shelf Lands Act Amendments of 1978
Section 21(e) of Section 208 of Title II

Public Law 95-372
September 18, 1978

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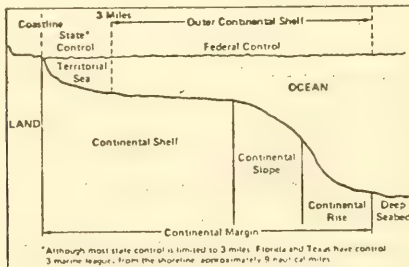
IX. Schedule

I. Purpose

The Outer Continental Shelf Lands Act Amendments of 1978 was signed into law "to establish a policy for the management of oil and natural gas in the Outer Continental Shelf; to protect the marine and coastal environment; to amend the Outer Continental Shelf Lands Act; and for other purposes."

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The "Outer Continental Shelf" as used in this Act means that portion of the continental margin lying beyond state boundaries within U.S. federal jurisdiction. The continental margin consists of the continental shelf, the continental slope, and the continental rise. Bounding the continental margin is the land (continent) on one side, and the deep seabed on the other (see Figure below). A more specific definition of the Outer Continental Shelf (OCS) is difficult because the legal meaning of the term continental shelf is inconsistent with the general scientific meaning, i.e., variations in the state jurisdiction (some states have 3 mile limits while others have 3 marine league limits), depth of water, and location and classification of shelf resources.



The purposes of the Act are to:

- (1) Establish policies and procedures for managing the oil and natural gas resources of the Outer Continental Shelf which are intended to result in expedited exploration and development of the Outer Continental Shelf in order to achieve national economic and energy policy goals, assure national security, reduce dependence on foreign sources, and maintain a favorable balance of payments in world trade;
- (2) Preserve, protect, and develop oil and natural gas resources in the Outer Continental Shelf in a manner which is consistent with the need to (A) make such resources available to meet the Nation's energy needs as rapidly as possible, (B) balance orderly energy resource development with protection of the human, marine, and coastal environments,

(C) insure the public a fair and equitable return on the resources of the Outer Continental Shelf and (D) preserve and maintain free enterprise competition;

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(3) Encourage development of new and improved technology for energy resource production which will eliminate or minimize risk of damage to the human, marine, and coastal environment;

(4) Provide States, and through States, local governments, which are impacted by Outer Continental Shelf oil and gas exploration, development, and production with comprehensive assistance in order to anticipate and plan for such impact, and thereby to assure adequate protection of the human environment;

(5) Assure that States, and through States, local governments, have timely access to information regarding activities on the Outer Continental Shelf, and opportunity to review and comment on decisions relating to such activities, in order to anticipate, ameliorate, and plan for the impacts of such activities;

(6) Assure that States, and through States, local governments, which are directly affected by exploration, development and production of oil and natural gas are provided an opportunity to participate in policy and planning decisions relating to management of the resources of the Outer Continental Shelf;

(7) Minimize or eliminate conflicts between the exploration, development, and production of oil and natural gas, and the recovery of other resources such as fish and shellfish;

(8) Establish an oilspill liability fund to pay for the prompt removal of any oil spilled or discharged as a result of activities on the Outer Continental Shelf and for any damages to public or private interests caused by such spills or discharges;

(9) Insure that the extent of oil and natural gas resources of the Outer Continental Shelf is assessed at the earliest practicable time; and

(10) Establish a fisherman's contingency fund to pay for damages to commercial fishing vessels and gear due to Outer Continental Shelf activities.

Section 21 of the Act establishes procedures for study, review, coordination and, if necessary, revision of safety regulations to promote safety and health in the exploration, development, and production of the minerals of the Outer Continental Shelf. Section 21(e) states:

The Secretary of Commerce, in cooperation with the Secretary of the Department in which the Coast Guard is operating, and the Director of the National Institute for Occupational Safety and Health, shall conduct studies of underwater diving techniques and equipment suitable for protection of human safety and improvement of diver performance. Such studies shall include, but not be limited to, decompression and excursion table development and improvement and all aspects of diver physiological restraints and protective gear for exposure to hostile environments.

~~SECRET~~

This Program Development Plan (PDP) is being developed specifically in response to Section 21(e) of the Act. With the assistance of the other designated agencies, the Department of Commerce (NOAA) is developing a study program designed to increase diver effectiveness, improve operational safety, and reduce those safety and health hazards associated with diving operations on the Outer Continental Shelf. In addition to obtaining assistance from other federal agencies, NOAA will solicit comments and recommendations from the private sector to ensure that any resulting research efforts will be responsive and of value to diving safety and performance.

II. Background

The vast majority of all U.S. commercial diving activities prior to 1960 were conducted in shallow waters (i.e., the inland waters, harbors, and sheltered coastal waters) for construction, repair, and salvage work. Inland and harbor diving is limited in depth by geography as well as by the work to be performed. The majority of inland and harbor diving occurs at depths less than 100 feet of seawater (fsw).

The first offshore drilling platform was in the Ellwood Field, off Santa Barbara, California, in 1924. The next offshore development occurred in 1947 when a 1,200 ton structure was erected in 20 feet of water in the Gulf of Mexico.

By 1970 energy requirements and developing technology resulted in the installation of a 7,000 ton platform in 373 feet of water in the Gulf of Mexico. In January 1978 there were 364 manned platforms, 2168 fixed structures of all types, 1200 supply and support vessels, 105 mobile drilling units, 175 separate diving operations, 46 construction and pipeline barges and over 27,000 individuals working on the Outer Continental Shelf of the United States. Today, approximately 2,300 fixed structures and 150 mobile offshore drilling units exist in the Gulf of Mexico under the jurisdiction of the U.S. Coast Guard and the Department of Interior.

Since 1960, commercial diving activities have utilized several breathing mixtures, in addition to air, to permit work at greater depths. The offshore diver does not have, because of geography, as severe a depth limitation as does the inland and harbor diver and may work at depths in excess of

1,000 fsw, with the majority of the diving activity occurring between the surface and a depth of 500 fsw. Technology has advanced sufficiently to enable working dives at depths in excess of 1,000 fsw. Divers are utilized extensively in most phases of the offshore energy industry -- exploration, construction, production, pipeline transportation, and maintenance. Based on national energy needs and the current trend in offshore oil exploration, deeper and longer working dives can be anticipated.

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At present there is wide diversity in the quality, quantity, and direction of research being applied to the needs of the divers working on the Outer Continental Shelf. The U.S. Navy has had and continues to have, an important role in the development of equipment and procedures designed to support manned underwater activities. U.S. Navy activities, however, are limited to military missions and Navy research efforts are thus primarily directed to their operational requirements.

Surface supplied (umbilical) diving is more common than scuba (self-contained) diving for Outer Continental Shelf commercial operations. This method involves supplying the diver with a breathing medium, either air or mixed-gas, through a hose, and other necessary life support measures, as required, from a remote source located at the surface. Surface supplied diving allows monitoring of the working diver, who is tethered, and in communication with the surface control station.

When a dive is lengthy or particularly deep, the use of a diving bell may be appropriate. A diving bell is a device which allows the diver to be transported to and from the underwater worksite.

Mixed-gas diving is carried out with a breathing medium consisting of oxygen and an inert gas or gases such as helium or nitrogen. In Outer Continental Shelf and offshore mixed-gas diving, a helium and oxygen mixture is most commonly used. Commercial mixed-gas operations usually involve surface supplied diving and may utilize a closed bell and saturation diving techniques.

In saturation diving, the body tissues become saturated with the inert gas or gases in the breathing medium. Saturation diving is used in situations where the diver will be exposed for long periods of time to elevated (high ambient) pressure conditions. The advantage of saturation diving is that once the body tissues become saturated with the inert gas or gases at any given depth, no additional decompression is needed regardless of the length of time of the diver's exposure to the elevated pressure.

III. Organization and Participants

In accordance with Section 21 of Section 208, of Title II, paragraph (e) of the Act, the draft plan for this program has been developed by the three lead agencies, National Oceanic and Atmospheric Administration (NOAA), Coast Guard, and the National Institute for Occupational Safety

and Health (NIOSH), with the assistance of the Navy, the Occupational Safety and Health Administration (OSHA), National Heart, Lung and Blood Institute, the Department of the Interior, and the Department of Energy.

This draft has resulted from a series of meetings with representatives from the above agencies and should be regarded as a preliminary draft only.

A final plan could not be developed properly without the cooperation and contribution from the commercial diving and academic communities. Their representatives, therefore, will be given an opportunity to review this preliminary draft and will be invited to participate in a public forum on May 29, 1979, sponsored by NOAA, the Coast Guard, and the NIOSH, with the assistance of the Undersea Medical Society and the Marine Technology Society. This forum will afford the non-federal community an opportunity to discuss and modify the program so that it will be optimally responsive to the intent of the Act. Subsequent to the public forum, assistance will be sought from individuals representing both government and non-government organizations for preparation of the final plan to further ensure that the research areas selected will be of direct benefit to the offshore diving community. With respect to the diving industry, it is hoped that information will be provided from management, the working diver, and from specialized technicians. Contributions from such sources should prove invaluable in developing a balanced program.

IV. Approach

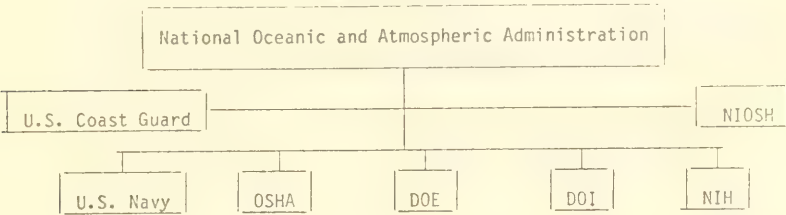
The overall goal of this program is to "conduct studies of underwater diving techniques and equipment suitable for protection of human safety and improvement of diver performance." The development of the program and its implementation will be done with the participation of both federal and non-federal organizations as described above. Although individual research projects have not been selected, some basic premises have been agreed upon by the representatives of the responsible federal agencies. These are as follows:

- Every effort will be made to utilize information from both national and international sources in the planning and implementation of this program.
- The program will be responsive to the needs of the working and scientific diver on the OCS.
- The program will be national in scope.
- Where research facilities are required, existing facilities will be utilized whenever possible.
- Federal and non-federal facilities will be used as appropriate.
- Funds will not be sought for the purpose of constructing new hyperbaric facilities
- Funds will be made available to federal and non-federal organizations to aid in solving selected immediate and long-range needs.
- Proprietary information, so identified, will be safeguarded.

V. Program Management

The Department of Commerce (NOAA) has been identified in the Act [Section 21(e)] as the lead agency for the development and implementation of this program in cooperation with the NIOSH and Coast Guard. In accordance with Section 21(f), NOAA has sought and obtained the assistance of the five federal agencies listed in Part II of this draft plan. The involved agencies are depicted graphically below.

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The program will be managed by NOAA with the continued assistance of representatives from the above mentioned agencies and from the diving and academic communities. While the representatives of the principle participating agencies (NOAA, NIOSH, and Coast Guard) will serve in both a technical and policy guidance role, the participation of the other agencies will primarily be in the form of technical advisors. The views expressed in this initial plan by the agency representatives other than those from NOAA, should not be construed as official positions of their respective agencies. The final planning document will, however, undergo an official agency review initiated by the Department of Commerce.

An ad hoc advisory group will be formed, composed of federal agency representatives and individuals representing the diving industry, the academic community, and organized labor. The responsibilities of this ad hoc group will include, but not be limited to, providing guidance on structuring and re-structuring the program, assigning program priorities, and reviewing the progress of projects undertaken.

NOAA will serve as the program focus both for funding and coordination. It is anticipated that research and development programs will be implemented primarily through grants and contracts with non-federal organizations, and through transfer of funds amongst federal agencies where appropriate.

VI. General Objectives

The following four objectives are categories into which proposed programs have been placed. Elements of each category are required to ensure

a balanced program. Research and development efforts will be coordinated closely among those organizations already engaged in supporting these areas, such as NOAA, the U.S. Navy, the National Institutes of Health (NIH), private foundations, and industrial organizations. The order in which the objectives are presented in this preliminary draft is not intended to imply a priority and should not be construed as such.

A. Procedures

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Emphasis will be on the responsiveness of routine procedures in the event of an emergency or life-threatening situation. The type of equipment used will have an important relationship to the procedures involved. Procedural research addressed will relate primarily to those factors concerned with the safety and health of divers.

- Example areas of concern are: communications, diving bell recompression chamber mating, evacuation of offshore platforms, medical procedures, and designation of responsibilities during emergencies.

B. Equipment

Within the present context, equipment is defined as that which is supportive of diving operations from a medical and operational safety standpoint. The diving industry has made great strides in developing personal support equipment such as diving helmets, regulators, umbilical hoses, and thermal control systems, and is continuing such efforts as required by diving operations. Because of high costs and extended time lags it is more difficult, however, for industry to support the development of basic technology and criteria for standardization leading to long range improvement in equipment systems. Federal support, therefore, should be used for those programs identified by industry, which will have direct operational benefits but are not necessarily responsive to immediate day-to-day problems.

C. Training

The procedures for selecting and training divers and support personnel should be designed not only to provide qualified individuals but also to anticipate future skill requirements. Considering the rapid technological advances being made in the field of diving, it is essential that training and retraining programs be developed that respond rapidly to such advances with respect to both equipment and procedures.

Areas in which training is required include divers, tenders, specialist support personnel, hyperbaric physicians, emergency medical technician/divers, and diving supervisors.

D. Biomedical and Diver Performance

Extensive research has been performed over the years in the field of hyperbaric medicine. The primary sources for support of this research have been the U.S. Navy and the National Institutes of Health with limited support coming from the National Science Foundation, NIOSH, NOAA, the U.S. Air Force, NASA, and private industry. Recognizing the existence of the above mentioned research programs, particularly those of the Navy and NIH, no attempt will be made to initiate an extensive basic biomedical research program in response to Section 21(e) of the Act. Emphasis will be placed on filling specific gaps in present knowledge, conducting critical studies, addressing long range health problems, and applying the results of prior research and making it available to interested parties.

In 1974, NIOSH formed a Federal Diving Task Force in an effort to coordinate the national diving community and to establish priorities for its principal needs with respect to occupational safety and health. One of the results of the Task Force activity was the "National Plan for the Safety and Health of Divers in their Quest for Subsea Energy." This plan, which was developed with the participation of the diving industry, was published by the Undersea Medical Society in January 1976. Since that time Federal diving regulations were promulgated by OSHA in July 1977, which became effective October 20, 1977, and by the Coast Guard in November 1978, which became effective February 1, 1979. The "National Plan" primarily addressed biomedical considerations and will be used as a reference document for those considerations during the development of the current PDP. Special workshops will be held, when appropriate, and literature searches made using the bibliographic resources of the Undersea Medical Society prior to initiating new research programs. These procedures should result in the identification of critical problem areas and minimize duplication of research or development efforts.

VII. Research and Development Programs

The following research and development programs do not in any way reflect an exhaustive list. They are based on recommendations by numerous individuals and on previous documents and articles. The programs are not listed in order of priority. Priorities will be established with assistance of the ad hoc advisory group following consideration of comments and reviews by both federal and non-federal organizations.

A. Procedures Program

Experience in the North Sea has shown the need for a capability to evacuate diving and non-diving personnel from offshore platforms

in the event of emergencies. If a diver is under pressure during an emergency requiring evacuation, the situation is complicated further. It may be necessary to provide a system capable of keeping a diver under pressure continuously during transit from an offshore location to a treatment center on shore. Such a system requires standard mating flanges, procedures, and closely coordinated communication and transportation. A study is needed to identify the necessary elements in this system for operations on the U.S. continental shelves. This program should not require research and development but will require close cooperation amongst the Coast Guard, the diving industry, equipment manufacturers, and those organizations operating shore-based hyperbaric treatment facilities. There are sufficient facilities existing on shore, however, so that construction of new treatment facilities should not be necessary. DRAFT

B. Equipment Program

As stated in Section VI-B, the emphasis here will be on the safety and operational aspects of equipment support systems rather than on the development or refinement of personal equipment items. Examples of such studies are:

Environmental Effects - the long range effects of adverse elements of the marine environment such as salt water, pollutants, wave action, and oil on life support systems components.

Performance Standards - A review of equipment performance standards.

Equipment Interface - The requirements for interfacing equipment components such as diving bells, recompression chambers, and their relation to emergency evacuation procedures.

Handling Gear - This program will involve the review of basic criteria and the recommendations for safe load requirements for primary and backup handling systems. The capabilities of systems used to lower and raise divers, bells and other underwater equipment will be evaluated including electro-hydraulic, air, mechanical and other systems with respect to extreme heat and cold, viscosity of fluids and oils in extreme temperatures, and the effects of external pressure on system components.

Breathing gas systems - Review existing standards and recommended minimum safe requirements for design, cleaning, inspection, gas filtration, manifolding, and filling of breathing gas containers. The wide differences among standards which now exist create difficulty in achieving uniform safety practices.

CO₂ Scrubber Systems - The state-of-the-art of CO₂ absorbent methods needs to be reviewed to determine how operational

efficiency and duration of scrubber systems can be increased. Possible approaches include a fresh look at canister design with respect to flow characteristics, temperature, humidity, and capacity; and the examination of possible new absorbent materials.

Closed Cycle Rebreather and Push Pull Breathing Systems - Extensive work has been done over the past 10 years on the development of mixed gas rebreathers. The U.S. Navy, utilizing technology developed by industry as well as its own, has developed and tested a push-pull rebreathing system which not only is suitable for operating out of diving bells to a depth of 1,000 feet, but which also conserves expensive helium. While this system has been designed to meet Navy requirements, the offshore diving industry should benefit directly with an appropriate transfer of technology. Accordingly it is proposed to initiate a small effort to implement this technology transfer from the Navy to the diving industry.

Supervisory Control Station for Diving Operations - Offshore diving operations are becoming increasingly complex and sophisticated with the use of open and closed diving bells, diver-lockout submersibles, decompression chambers, remotely controlled vehicles, and one-atmosphere diving systems. Because of the increase in system complexity and depth of operation, consideration should be given to the development of an integrated operational control station which takes full advantage of current electronic and computer technology. A properly designed system would permit the operations supervisor to maintain cognizance and be continually updated on the status of even the most complex systems. This would permit the anticipation of system malfunction, monitoring of the divers, coordination of support personnel, and emergency and abort procedures including decompression and treatment schedules. While the technology is readily available, an initial effort is needed to identify the parameters to be included, to develop the general approach, system configuration, and operational characteristics.

C. Training Program

Curricula

- Specialist Training: The complexity of technology in the field of diving is increasing continually. On the assumption that this trend will continue, there will be a need for specialized training for divers and diver support personnel. The selection of topics for training will be made in cooperation with the ad hoc advisory group. The role of federal government will be to assist in the development of the curricula and the establishment of the training programs but actual training will be carried out by non-federal organizations.

- Emergency Medical Technician (Diving) EMTd: As in other areas, the need for emergency medical training is increasing in the field of diving. Because of the impracticality of providing physicians on offshore facilities, there is a need to train selected diving personnel in the emergency medical care of diving casualties. While one or two organizations do offer such training, there is a need to develop criteria for established curricula resulting in a certifiable course that is recognized by the Department of Transportation on the same basis as other specialized courses in emergency medical care. In addition to providing basic training, it is important to establish a procedure to allow for retraining (refresher courses) to ensure the utilization of the most current techniques of emergency medical care and the maintenance of skills.

- Diving Physicians: An expansion of the current NOAA/Navy/Undersea Medical Society program for training physicians in diving medicine, with a goal of training and qualifying about 150 physicians over a five year initial period. Federal support should continue throughout this initial period, after which the responsibility for maintenance at this level should be assumed by non-federal organizations.

- Training of Research Personnel: Development of a program to train scientists and engineers in the techniques of deep water diving and the use of the equipment involved. Such a program would be carried out with the cooperation of commercial diving training organizations. The investigations mandated under Section 20 of this Act requires that there exist a cadre of scientists and engineers capable of conducting underwater research programs on the OCS.

D. Biomedical Program

This program has both applied and basic elements. The dual goals of providing answers to immediate problems plus the study of specific basic medical issues should assure the systematic improvement of diver effectiveness and at the same time minimize health hazards. It is recognized that the role of the diver is shifting as technology advances, and that in some instances there will continue to be engineering solutions to what historically have been biomedical problems, e.g., the one atmosphere diving system and/or remotely controlled manipulators. The following proposed programs fall into two general categories: Those of an applied nature addressing such topical areas as accident management, medical standards, and practical problems facing the diver; and those addressing more basic research in diving medicine and physiology. It is particularly in the latter areas that extra care will be taken to avoid duplicating ongoing research programs. It is the intent of NOAA to encourage basic research in areas where research gaps exist. In areas where research is already proceeding, efforts

will be made to utilize and/or perhaps supplement existing programs as specific requirements dictate. UNCLASSIFIED

The use of the ad hoc advisory committee to help monitor this program will be of particular value because representatives of those organizations supporting most current diving research will be members.

Examples of recommended applied biomedical programs are:

- Diving Accident Management - NOAA, in cooperation with the Undersea Medical Society, is in the process of establishing a national diving accident network. This network should permit the expeditious handling of diving accident victims using existing emergency evacuation systems and treatment centers. The use of an accident investigation team will facilitate the acquisition and dissemination of accident related information. A problem needing specific attention in this regard involves the proper examination of diving accident fatalities. The true cause of death in a pressure-related accident may inadvertently be obscured by a medical examiner who is not familiar with hyperbaric physiology. For this reason, the broad dissemination of information relating to the proper autopsy procedures in such cases is important. It is proposed therefore to develop a system for medical examiners, which provides the requisite medical expertise on the handling of diving casualties.
- Medical Criteria Standards - The growth of national diving activities has been accompanied by an increase in diving related medical problems. Medical aspects of diving is a subject area that is not covered well in most medical school instruction since these problems are not seen much, if at all, in the general practice of medicine. Interested physicians can easily acquire the knowledge of the general aspects of diving medicine sufficient to treat common diving complaints or to recognize the need for consultation with an expert specializing in complex diving medical problems. It would be useful to patients and medical practitioners alike if the incidence of more common medical problems of diving were identified and standard guidelines were established for the provision of medical care to divers and for the conduct of medical and paramedical instruction in general diving medicine. The results of this study will be fed into existing physician and Emergency Medical Technician Diving (EMTd) training programs.

An additional area needing investigation involves identifying individual differences with respect to tolerance to increased atmospheric pressures and the effects of such increases on performance. If such differences can be clearly delineated,

it may be possible to refine physical examination procedures with the goal of improving the quality of diver selection.

- Epidemiological Study - This would be a broad study to determine long range health problems associated with diving, factors associated with pressure-related accidents, effectiveness of different decompression sickness treatment regimes, and causes of fatal diving accidents. Such a study not only would aid in improving diver safety and health, but would aid in the acquisition of actuarial data and provide information to assist in the selection of future research areas.
- National Diving Data Center - Establishment and maintenance of a National Diving Data Center to collect, analyze, and disseminate data obtained from the national diving accident network, university data centers, treatment centers and federal agencies concerned with the safety and health of divers. The data assembled would be related to decompression schedules, treatment of diving casualties, and diving accidents.
- Air/Nitrogen-Oxygen Saturation Diving - Recent investigations have shown that it is possible to use air and nitrogen-oxygen breathing mixtures in situations which heretofore were thought to require more exotic and expensive breathing gases. Extended bottom times can be obtained at depths up to 250 fsw when divers saturate on air or nitrogen-oxygen mixtures at depths from 50-100 fsw. Additional research is needed, however, to develop repetitive dive schedules, decompression procedures, and the procedures for using helium-oxygen as a breathing gas when making excursion dives from a saturation breathing mixture of air or nitrogen-oxygen.
- Helium-Oxygen Diving - Although helium-oxygen breathing mixtures have been in use for many years, the significant increase in diving depths is continuing to require new research. For example, studies are needed to further refine and improve the safety and efficiency of excursion diving from saturation on helium-oxygen breathing mixtures. Specifically, information is needed on optimizing compression rate and decompression profiles. In addition, there is a need for improvement of helium-oxygen diving procedures for diving to depths of 150-600 fsw and to increase bottom times significantly beyond their current limits at all depths.
- Thermal Problems in Diving - Diving in winter, northern latitudes, in deep water, or when using helium, can produce severe thermal problems when the diver is not protected adequately. Chilling, even if not severe enough to threaten life, will produce loss of dexterity and sense of touch in the hands,

making it difficult for a diver to do useful work or in some instances to control diving equipment. The ability to think clearly and short-term memory also may be affected seriously by cold.

A combined approach should be pursued to further develop protective garments that will permit divers to work safely and efficiently underwater in all depths and locations.

Areas requiring study include: establishing thermal tolerance levels; improving methods of monitoring the diver's thermal state; developing improved insulation and self-contained power sources and to define the relationships between body heat loss and performance.

- Microbiology - Microbiological hazards with respect to diving fall into three general categories: the effects of increased atmospheric pressure on the behavior of microorganisms; the possible effects of increased pressure on the human immune response; and infections from pathogenic organisms found in sea water. Research is needed to define the consequences of these variables for diving. Specific areas in which research is needed include: the effects of hyperbaric conditions on the permeability of chemicals in microbial processes, microbial metabolism of organic and inorganic compounds, enzyme activity and protein synthesis.

Research is also needed related to infectious and immunological procedures in connection with problems stemming from living in close confinement such as in pressure chambers or undersea habitats.

With respect to the third category, there has been increasing recognition of the health risks to divers operating in polluted waters. In order to assess the risks involved, as well as the efficacy of decontamination procedures currently employed aboard vessels and offshore platforms, it is necessary to carry out microbiological studies that include both microbial ecology and medical microbiology, so that the incidence, seasonal and spatial distribution, persistence, and pathogenicity of the microorganisms found in polluted estuarine and marine water and sediment be determined.

- Medical and Surgical Treatment Under Hyperbaric Pressure - Medical or surgical treatment within a diving chamber under pressure may be unavoidable. Even emergency decompression for transfer to a medical center for necessary treatment may involve more delay than is permissible under some circumstances. In preparing to deal with a hyperbaric medical crises, the physician must be aware of the constraints of the chamber and of the lack of medical precedents and guidelines. Are the dosages of common pharmaceutical agents, antibiotics or anesthetics, for

example altered by high-pressure? The reversal of anesthetic effects by high pressure is a well known but poorly understood phenomenon. Thought must be given to diagnostic tests and procedures that will work in the chamber, to the selection of anesthetic approaches and surgical procedures, to the requirement for communication equipment adequate to provide expert consultation to the medical personnel at pressure within the chamber, and to the conduct of nursing and life-supporting procedures while the patient is being decompressed before transfer to medical treatment centers. A compendium of such information and procedures would be invaluable to (1) those who are called upon to render emergency medical or surgical treatment in the chamber and (2) those who have responsibility for the medical care of workers in the diving industry and for the advance preparations necessary to make such emergency procedures successful.

- Delayed Treatment of Decompression Sickness - In instances in which there is a significant delay between the onset of decompression sickness and recompression, standard treatment procedures may not be effective. Such instances can result from operating in a remote location, failure of a recompression chamber to function properly, or transportation difficulties.

Studies are needed to determine the best pre-recompression treatment procedures, i.e., adjunctive drug therapy, administration of oxygen, intravenous fluid therapy, to develop alternative treatment procedures when the standard procedures fail to alleviate symptoms of decompression sickness and to establish treatment flow diagrams, and related emergency care enroute to the treatment facility.

The following programs are examples of studies of a more basic nature. These problems have been the subject of much research in the past. Before undertaking new research efforts in these areas, the advice of experts in the field would be sought in order to avoid duplication of efforts and to facilitate the selection of specific gaps in our knowledge that need to be filled.

- Mechanism of Oxygen Toxicity and its Prevention - Since the partial pressure of oxygen is a function of both proportion and absolute pressure (depth), protection against the variations of oxygen pressure becomes an increasing problem with deeper diving, as the percentage of oxygen in the breathing mixture must become smaller and smaller. On the other hand if protection against oxygen toxicity could be developed there are applications for reducing decompression time or for improving the effectiveness of recompression therapy in which the utilization of high pressures of oxygen would have definite advantages. There is a need to conduct investigations into the effects of oxygen under pressure, both in the basic

research areas of the biochemical mechanisms of oxygen toxicity and its prevention and in the more applied/developments of testing compounds or diving procedures which enhance diving capabilities while avoiding oxygen toxicity.

- Sudden Loss of Consciousness of Divers - There have been a number of unexplained cases of loss of consciousness of divers during operational diving, some of which have resulted in death. The underlying mechanisms may involve physiological responses to hyperbaric conditions or variables associated with the partial pressures of the gases being breathed. If such deaths are to be prevented in the future, a better understanding of the physiological mechanisms is needed, especially with respect to cerebral function.
- Cardio-Respiratory Effects of Hyperbaric Exposures - The need to breathe compressed gases in diving to compensate for increased hydraulic pressure is the source of problems of decompression sickness and of the requirement for decompression schedules.

The difficulty in ventilating with dense gases and of expanding the lungs against water pressure affects CO₂ removal from the body and through that the body's acid-base balance. Differences in hydrostatic pressures in diving force body fluids into the lung cavity where they affect both ventilation and circulation. A knowledge of the dynamic effects and interactions of these cardio-respiratory responses is probably basic to a complete understanding of almost every biomedical change in diving. Every advance in diving technology, development of new diving gas mixtures, new underwater breathing apparatus, extension of depth capabilities or prolongation of time at present diving depths will require a re-evaluation of how such changes in the conditions or environment of diving will impact on the diver's safety and health. An understanding of these processes might point the way to safe engineering or operational exploitation of new possibilities in diving. An integrated program of investigation into the responses of the cardio-respiratory system to diving conditions is essential to the success of any biomedical research program in diving.

- Formation of Bubbles - Studies are needed of the exact mechanism for formation of bubbles in the diver's body and the relationship between general bubble formation and the specific initiation of decompression sickness. The formulation of decompression schedules to avoid decompression sickness is a pragmatic and inexact process just as is the formulation of recompression therapies to best treat the diver injured by decompression sickness or air embolism. Being inexact, the procedures often are inefficient or ineffective and fail to protect the health and safety of divers concerned.

New technologies in bioengineering and computer sciences have provided a beginning insight into the dynamic processes involved in inert gas functions within the body and in the formation and resolution of bubbles in living tissue. Investigations are needed into such factors as the difference between various inert gases, or combinations of them, which might be used in diving breathing mixtures.

Further progress in these investigations is fundamental to our understanding of the scientific basis for human diving. The information generated can serve as bioengineering data for accurate and efficient computer modeling of decompression procedures and also can lead to improved recompression therapies based upon a fuller understanding of the generation of decompression injury and of the best means to restore normal function after such injury.

- High Pressure Nervous Syndrome - When vertebrates, including man, are exposed to pressures greater than 15 ATA, either in the dry hyperbaric environment of a pressure chamber or by the hydrostatic pressure of actual submersion, signs and symptoms appear which include tremors of the extremities, more severe myoclonic jerking, fatigue, and ultimately convulsions. In association with these characteristics, there are changes in the electrical activity of the brain and, at times, nausea, dizziness, and vertigo.

In humans the above signs and symptoms comprise the High Pressure Nervous Syndrome (HPNS); they are affected by the rate of compression as well as by the hydrostatic pressure attained. At depths greater than 1500 fsw, even with very long compression times signs and symptoms of HPNS remain which may affect the performance, health, and safety of the deep diver.

Once the taxonomy and signs and symptoms of HPNS have been identified, it is of importance to determine the best methods or profiles for compressing divers to great depths. This may involve testing and applying such factors as selection of personnel, compression profile, accommodation and adaptation, adjustment of temperature, and the use of nitrogen or various anesthetics to modify HPNS.

- Dysbaric Osteonecrosis - Dysbaric Osteonecrosis refers to destructive changes in the relative density of the affected bone. These changes are not of infectious origin, and they have been noted in many conditions such as chronic alcoholism, pancreatitis, sickle-cell anemia, in patients using systemic steroids, and in caisson workers and divers.

Despite the steady increase in published information, important facts about the cause, course, and prevalence of osteonecrosis are still unknown. Differences in compression/decompression exposures, inert gases, types of work, and traditional practices all appear to influence the occurrence of this condition.

The medico-legal aspects of this disease need to be established. Understanding the differences between compressed air workers and divers, in terms both of anatomical sites and prevalence, may clarify the problem somewhat.

In addition, experimental, clinical, and epidemiological research is needed to enhance our ability to treat and prevent this condition.

- Audio-Vestibular Injuries in Diving - Injury to the inner ear of the diver has serious and often permanent effect on the ability to hear or to maintain normal balance and equilibrium (not to mention the acute but extremely distressing symptoms of nausea, vomiting, and vertigo). These injuries are presumed to be the result of decompression sickness of a special type. The phenomenon is now recognized in association with rapid ascents in very deep diving. Investigations of the genesis of decompression bubbles in the anatomically protected organs of the inner ear, and of the mechanism of injury in such decompression accidents involving the audio-vestibular system may turn out to be extremely fruitful for the understanding of the general mechanisms of inert gas transfer within the body. That understanding may be necessary for the development of successful computer modelling of decompression schedules and of the rate of outgassing of the inert portion of diving breathing mixtures from the body of the diver.

VIII. Implementation of Results

The results of this program will be in the form of one or more of the following: scientific and technical recommendations for reports, new diving procedures, new or modified procedures for the treatment and emergency care of diving casualties, and new or modified equipment. In addition, the information obtained should increase our understanding of some of the basic mechanisms pertaining to hyperbaric physiology.

The implementation of the results into practice should be greatly facilitated because of the active participation of the diving industry throughout the development of the program plan and the conduct of the work itself through grants and contracts. Further, because of the emphasis on balancing applied research and the application of existing data to current problems, with studying selected basic issues, direct benefits should accrue immediately to the working diver. Examples of such benefits are: safer and more efficient diving practices, improved equipment,

reduction in operational costs and, perhaps a better understanding of diving by the non-diving public.

IX. Schedule

January 17	Completion of preliminary draft by lead agencies
January 22	Meeting of other Federal agencies to present and discuss draft
February 5	Announcement of the PDP procedures and status at the International Diving Symposium, New Orleans
February 16	Second interagency meeting to discuss and receive comments from other federal agencies
April 16	Completion of Revised draft PDP
April 26	Announcement of plan in the Federal Register
April 25	Draft PDP mailed out to academic and industrial community and to all other interested parties for comment
May 29	Comments received from the public sector and discussed during a public forum in Miami, FL
June-August	Completion of final plan with assistance of representatives of both Federal and non-Federal organizations.

Mr. FORSYTHE. One of the focuses of our hearing this morning has been on the seeming inability of agencies to meet congressionally imposed deadlines. Our colleague David Treen has asked me to question you about NOAA's experience in complying with a deadline set in the Coastal Zone Management Act Amendments of 1976. On page 32 of the conference report on that legislation the managers stated:

The conferees expect the Secretary to make the necessary determinations for extending lateral seaward boundaries in a timely manner, and to publish such determinations within 270 days after the date of enactment of this subsection.

Mr. Treen tells us that the Louisiana-Mississippi boundary has not been determined despite the fact that oral hearings on that subject were held last May.

How many boundaries have been extended by now? When you anticipate determining a seaward lateral boundary between Louisiana and Mississippi?

Mr. WALSH. I would also like to supply that for the record. In general though, there are a series of boundary disputes that are still unresolved. You mentioned the one there. This are also other disputes that I will respond to.

[The following was received for the record:]

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION,
Washington, D.C., May 25, 1979.

Hon. CHARLES C. FINCH,
Governor of Mississippi,
Jackson, Miss.

DEAR GOVERNOR FINCH: As you know, section 308(b) of the Coastal Zone Management Act of 1972, as amended, provides for the annual calculation of allotments to each coastal state of the formula grant portion of financial assistance available to such states under the Coastal Energy Impact Program (CEIP). Since a portion of such formula grants are based upon specified outer Continental Shelf activities adjacent to each state, the Act also provides for establishing CEIP delimitation lines between the states, extending through the Continental Shelf, so as to determine on which state's side of the line such specified activities occur.

If a lateral seaward boundary between two states has not been clearly defined or fixed by agreement or judicial decision, the Act requires that I (by delegation from the Secretary of Commerce) establish that CEIP line according to the applicable principles of law. As of the present time, there has been no such agreement or judicial decision establishing a lateral seaward boundary between Mississippi and Louisiana.

Thus, for an extended period we have been involved in receiving information from the affected states, and conducting a careful analysis, pertaining to the applicable principles of law which guide me in establishing such line, if this becomes necessary due to the continued lack of agreement between your states. I apologize for the substantial time which has been required for our analysis. This has been essentially due to the fact that present line is the first one that we have so addressed. The delay has resulted from substantial and unexpected problems which we have encountered in the process, some of which were caused by the unique complexities related to this particular line, and some of which applied generically to all CEIP lines but were encountered in the course of this first effort. I appreciate the assistance, courtesy and patience displayed by representatives of your state as we have proceeded.

I now have completed an analysis of the materials available to me, including a report containing analysis and recommendations from a panel of expert consultants with whom we have contracted for assistance. Pursuant to may comments at the close of oral presentations last year on behalf of your states, I would like to convey to you the specific area within which I would establish a Mississippi/Louisiana CEIP delimitation line according to the applicable principles of law.

Based upon my analysis, I have concluded that the applicable principles of law would call for the establishment of a line which is west of an equidistant line between Mississippi and Louisiana and east of a line approximating the southeasterly thrust of the Mississippi River Delta from the eastern jetty of South Pass on that

delta. I have had such lines portrayed on the enclosed chart, to assist you in visualizing the area I have selected.¹

As I have indicated before, we still prefer that the states agree on CEIP delimitation lines. Be advising you of the defined area within which I would establish a line if I must do so, I hope to provide a more concrete basis for discussion and agreement between Mississippi and Louisiana. In this regard, I would like to point out that we would be willing to accept for CEIP purposes an agreement on proportional sharing of CEIP formula grant funds within a specified area without the necessity for agreement on a single line. Our willingness to do so is based on the belief that it may aid in accomplishing our basic purpose, which ultimately is the rational distribution of CEIP formula grant funds. Perhaps Mississippi would find this form of agreement more acceptable or feasible than agreement on a single line. If your states, upon reconsideration, wish to seek agreement at this point, I strongly encourage you to do so. I will allow you 2 weeks from receipt of this letter to decide if you desire the further pursuit of an agreement with Louisiana. If your states do not elect to pursue such course, then I will review all the information presented and establish a CEIP delimitation line.

I look forward to your response to my proposal. We would be happy to answer any question you may have about the procedures.

Sincerely yours,

ROBERT W. KNECHT,
Assistant Administrator.

Mr. FORSYTHE. Congressman Treen asked that I question you about the number of diving fatalities experienced on the OCS after implementation of OSHA's diving standards.

John J. McNiff, director of the National Underwater Data Center at the University of Rhode Island has stated that there were at least three OCS diving fatalities associated with offshore construction in 1978, after OSHA standards were implemented, but no more than nine in the preceding 8-year period, 1970-77.

How do you account for the apparent increase in fatalities?

Mr. WHITING. I would have to look at the particular cases. An absolute increase in the number of fatalities, is meaningless without information on actual hours of exposure. We would have to look at the total base of industrial activity on the OCS and compute the rate at which diving fatalities occurred in order to arrive at any reasonable explanation.

Mr. FORSYTHE. Do you want to look at the situation and respond for the record?

Mr. WHITING. Yes, sir.

Mr. FORSYTHE. I would appreciate that.

[The following was received for the record:]

U.S. DEPARTMENT OF LABOR,
OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION,
Washington, D.C., May 14, 1979.

HON. JOHN M. MURPHY,
Chairman, Ad Hoc Committee on the Outer Continental Shelf,
House of Representatives, Washington, D.C.

DEAR MR. CHAIRMAN: Enclosed is the edited transcript of my March 7, 1979, appearance before your Committee. During my testimony, I indicated to Congressman Treen that I would provide comments from the Occupational Safety and Health Administration concerning National Underwater Data Center figures which indicated an increase in the absolute number of deaths among divers on the outer continental shelf.

To date we have been unable to obtain a copy of these data for our review and analysis. We reported this fact to a member of your Committee staff in an April 23, 1979, telephone conversation. In that conversation it was agreed that we would not delay in providing OSHA's edited transcript, and that we would submit our analysis of the NUDC data as soon as possible.

¹ Enclosure: Placed in the files of the committee.

We appreciate your Committee's efforts in helping to ensure that workers on the outer continental shelf are provided with safe and healthful working conditions. Please call if we can be of further assistance to you.

Sincerely,

BASIL WHITING,
Deputy Assistant Secretary.

Mr. FORSYTHE. Mr. Langenkamp, I guess you really answered this one. Your recommendations on the 5-year leasing plan are that there should be seven lease sales per year to meet the production goals as you have outlined in your production study?

Mr. LANGENKAMP. Yes.

Mr. FORSYTHE. In those seven lease sales, how many do you recommend in the gulf?

Mr. LANGENKAMP. We are recommending three annually. If you will turn to table 3 on our testimony, we summarize some of those results.

Do you have the results on that, Mr. Chairman?

Mr. HUGHES. I think the gentleman has it now. I understand the testimony was late in arriving because OMB was rewriting it for you.

Mr. LANGENKAMP. Not substantially.

Mr. HUGHES. I would expect you to say that any way.

Mr. LANGENKAMP. Congressman Forsythe, if you will turn to page 14, you will see a summary and you note there that we have in the first column the seven-sale scenario and down below the quantity of oil and gas that are projected, 2.729 billion barrels resulting from those sales and 4.276 trillion cubic feet of gas. You will see by—this is just an extrapolation from the projection goals but you will see that by dropping to six sales, and retaining three sales in the gulf, we drop 14 percent in the probable oil recovery. We drop very little in regard to the gas recovery but if we drop from seven sales to six sales and reduce the gulf sales, from three to two, then you have a 4-percent decline in the oil recovery and a 13-percent decline in the oil and gas recovery. We would stress that the resource figures which we have based all of this computer modeling on and so forth, are USGS figures. There are other figures around but we felt that the USGS figures were the proper ones to use.

Mr. FORSYTHE. Well, thank you. And you will make that a part of the record so that we can have all of that information.

In the area of regulation for due diligence standards which we discussed at some length with the Department of the Interior, aren't these regulations within your legal authority?

Mr. LANGENKAMP. Yes, that is correct.

Mr. FORSYTHE. Has DOI consulted with you in this matter?

Mr. LANGENKAMP. Well, at the present time as I understand it, Congressman, we are conducting a study in anticipation of regulations on the due diligence.

Mr. FORSYTHE. You are conducting a study?

Mr. LANGENKAMP. The Department of Energy.

Mr. FORSYTHE. You are preparing to implement due diligence mandates?

Mr. LANGENKAMP. That is correct.

Mr. FORSYTHE. When is this going to come together?

Mr. LANGENKAMP. Well, I think before the end of the fiscal year we will have regulations on due diligence. We have emphasized the regulations in the area of bidding systems in the OCS production goals rather than diligence regulations, in these initial months after the passage of the act.

Mr. FORSYTHE. Certainly, I would think that with the concern the Nation has as does your Secretary, for our entire energy problem, the whole question of implementation becomes more crucial every passing day.

This committee does have a strong interest in this area and I certainly urge the administration and every agency involved that we do not find things delayed between agencies as we go down the road.

You say you have completed your proposal on the alternate bidding system?

Mr. LANGENKAMP. Yes, that is correct.

Mr. FORSYTHE. Have they been published for comment?

Mr. LANGENKAMP. No, they have not. They are presently under review at the Department of Interior.

Mr. FORSYTHE. How long has that been going on?

Mr. LANGENKAMP. Well, it varied. There has been dialog between Energy and the Department of the Interior since the act was passed and I think that our informal and formal procedures regarding these regulations are about to come to a conclusion, but they have not yet.

Mr. FORSYTHE. So actually you are saying that since the act was passed this dialog has been continuing? The normal process of submitting prepared regulations for review has taken place. I guess we did not pinpoint that and I guess it would vary with each specific new bid system, right?

Mr. LANGENKAMP. Well, we made an informal submission to the Department of the Interior on the OCS bidding systems in November, I mean in September, and since that time we have been—I do not make a great deal of distinction between the formal and informal system. We are attempting to work cooperatively with the Department of the Interior and the relationship has been one characterized by give and take and as far as I am concerned, I think we are in the process of resolving the matter of these regulations in the very near future.

Mr. FORSYTHE. The word "process" has been used around here quite frequently. The period of review is what concerns this committee. But you do say you feel confident that you are close to completing that current issue?

Mr. LANGENKAMP. Yes.

Mr. FORSYTHE. And due diligence, will be complete within the fiscal year?

Mr. LANGENKAMP. Yes.

Mr. FORSYTHE. Which is not too far down the road.

Mr. CHAIRMAN. I think I will pass.

Mr. HUGHES. Thank you, Mr. Forsythe.

First of all, Mr. Langenkamp, maybe you can interpret table 3 for me. I must confess counsel and I are having some difficulty trying to understand your table particularly as it applies to the annual sale frequencies.

Mr. LANGENKAMP. I will attempt to answer any question you have but perhaps Bob Kalter can back me up if I cannot handle the question.

Do you want me to just generally explain this or do you have a specific question?

Mr. HUGHES. Maybe you could tell us—you indicate annual sale frequencies and you have a column 7 and you have it broken down by regions. You have 12, for instance, for the Gulf of Mexico. Maybe you can tell me just what that 12 means.

Mr. LANGENKAMP. That means three sales a year for 4 years. This is a 4-year span.

Mr. HUGHES. So the Atlantic would be one sale per year for 4 years and the same thing with the Pacific and in Alaska would be two sales per year for 4 years?

Mr. LANGENKAMP. Yes.

Mr. HUGHES. Is that what that means?

Mr. LANGENKAMP. Not necessarily distributed in that order except maybe for the Gulf of Mexico. Bob Kalter wanted to make a comment on that point.

Mr. KALTER. The table on the far left, which is listed as seven sales per year, covers the 1982 to 1985 timetable. We are assuming that the Interior Department August 1977 schedule stays in effect through the end of 1981 and that a new schedule is promulgated through 1981 to 1985. So we are talking here three sales per year for 4 years in the Gulf of Mexico and a total of four sales per year in the Atlantic and Pacific and eight in Alaska.

Now, those are not necessarily distributed one per year.

Mr. HUGHES. Eight sales a year?

Mr. KALTER. No, negative.

Mr. HUGHES. Eight sales for 4 years?

Mr. KALTER. Over a 4-year period but not necessarily one each year in the 4-year period. What we essentially have done here is run a series of computer models which take account of the USGS resource estimates, the costs of production in each of the regions, assumed resource prices and the constraints; constraints on the leasing process, both as concerns the industry, as you mentioned before, and as far as the Government is involved in carry out the lease sales and from those, from that analysis, comes a series of potential lease sales in various areas and we have essentially modeled the expected production from oil and gas from going ahead with those sales.

Now, what the rest of the table does is compare the recommendation for seven sales a year with recommendations for six, five and four sales a year to see what the quantitative difference might be if you drop down to five or six or four.

Mr. HUGHES. Perhaps you can supply to this committee all the variables that went into your computation.

Mr. LANGENKAMP. Congressman, we will be glad to submit a copy of the goals.

Mr. HUGHES. Without objection that will be received for the record.

[The following was received for the record:]

OCS Oil and Gas Production Goals for 1985, 1990, and 1995 Assuming
Mean Resource and Yield Levels for the Medium Low and Medium High
Price Levels

Source of Production	Estimated 1978	Medium Low Price ¹			Medium High Price ²		
		1985	1990	1995	1985	1990	1995
<u>Oil Production³</u>							
Existing leases ⁴	292	257	198	97	257	198	97
DOI 1979-81 ⁵	0	27	310	201	26	319	210
Optimized 1982-85 ⁶	0	0	73	234	0	80	274
Total	292	284	581	532	283	597	581
<u>Gas Production⁷</u>							
Existing leases	4385	3543	2364	1186	3543	2364	1186
DOI 1979-81	0	207	544	259	214	556	267
Optimized 1982-85	0	0	401	511	0	408	536
Total	4385	3750	3309	1956	3757	3328	1989

¹\$18.50/bbl and \$3.50/mcf.

²\$23.85/bbl and \$4.50/mcf.

³Annual production in millions of barrels.

⁴USGS "most likely" estimate.

⁵The proposed schedule provides for 6 sales in 1979, 4 in 1980, and 5 in 1981.

⁶Assuming 7 sales per year from 1982 to 1984 and two sales in 1985.

⁷Annual production in millions of mcf.

Mr. LANGENKAMP. We might mention that this key sequence of sales set forth is not necessarily the 6 level or the 5 level or the 4 level. It is not necessarily the sequence that the Department of the Interior will select. The six-sale column and the five-sale and four-sale were optimum sale patterns at that level.

Mr. HUGHES. Obviously that does not take into account a lot of other variables that you have no control over, such as litigation which would really throw your computations off significantly.

Mr. LANGENKAMP. That is right.

Mr. HUGHES. Also, I understand it is based upon USGS estimates of hydrocarbons in an area based upon seismic and geophysical and other testing?

Mr. LANGENKAMP. That is correct.

Mr. HUGHES. They have been known to reduce that significantly in a very short period of time as we began to sink test wells into structures so that there is a great deal of speculation involved even within the components that go into the model.

Mr. LANGENKAMP. I think that is generally correct. Dr. Kalter wanted to make a comment on that.

Mr. KALTER. Congressman Hughes, we recognize the sensitivity of all numbers of variables, prices, production costs, et cetera, in the document that we have submitted for the record; and, by the way, Counsel O'Brien has been sent a copy in the last several days

and I think the minority counsel. We have attempted to run sensitivity analyses in all these assumptions.

We have run it with high, low and medium resource ranges to see whether it would make any difference in the lease schedules that we are talking about and to see whether it would make any difference in the total levels of production. Obviously, it makes differences in the total levels of production.

We are finding, somewhat hopefully, that it does not make a lot of difference in terms of the lease schedules themselves. When you go from a medium to a low or a medium to a high, the schedules tend to stay about the same, but the production drops when you go from medium down to low.

Mr. HUGHES. Did you factor in OMB's need for additional money in time to help balance the budget?

Mr. KALTER. Negative.

The entire process was run on the basis of maximizing social welfare in terms of economic value. We also ran it to maximize production and found that the difference between maximizing social value, in terms of economic value and maximizing value was less than 4 percent.

Mr. HUGHES. Let me ask a general question.

I think that you indicated at the very outset of your testimony, Mr. Langenkamp, that the administration was very supportive of the chairman's initial opening statement that, with the world situation being what it is, that it is even more important that we move along and inventory as best we can resources domestically.

I wonder if you could tell me what your projections are for the next—well, until 1985 for OCS contributions to this kind of energy need?

Mr. LANGENKAMP. Well, I think we have those figures here. I am told to refer to table 2.

If you take a look at the projections based on the existing leasing schedule, this is on page 13.

Mr. HUGHES. I have it.

Mr. LANGENKAMP. It sets forth the total annual production figures for the year 1985, 1990, 1995, based on the existing leases.

The 1979 through 1981 projected leases—and that sets forth our projections—and you can see what the contribution is.

It is not as great as we would like, but you will also see that we have based it on two different price scenarios, a medium/low price and a medium/high price.

Mr. HUGHES. What do you refer to; what is your definition of "medium price"?

Mr. KALTER. We ran four price schedules through the medium/low price and the medium/high price scenarios being used for the national energy plan, the exercise that the department is going through right now. They are \$18.50 a barrel for the medium/low price, and \$23.85 for the medium/high price in constant dollars.

Now, the production from the existing leases, which is Row 1 in the table, does not vary by price, because those numbers were furnished to us by the USGS as extrapolations in the current decline curves on existing leases. Everything from that point on; that is, the scheduled sales for 1979 through 1981, and the optimized sales for 1981 through 1985, are based on different price

scenarios; because we anticipate different size reservoirs coming into production, depending on the world price.

Mr. HUGHES. I am curious. What is your scenario for medium/low-priced, for the year 1980?

Mr. KALTER. We are running constant prices here and the medium/low price is \$18.50 a barrel.

Mr. HUGHES. It remains the same?

Mr. KALTER. It remains the same.

Mr. HUGHES. You are an optimist.

Mr. KALTER. Probably.

Mr. HUGHES. What is the medium/high price?

Mr. KALTER. The medium/price—

Mr. HUGHES. For 1990.

Mr. KALTER. A barrel at \$23.85 and we assume that to be constant. We have run a scenario and I believe it is \$31 a barrel. All the assumptions are listed on table 1, the previous two pages.

Mr. HUGHES. Did you get that information from OPEC or the oil companies?

Mr. KALTER. For planning purposes we had to make some assumption and we chose four different price levels starting with the current world price and moving up.

Mr. HUGHES. I am interested more specifically in the Baltimore Canyon area, which is part of your analysis. Have you made any adjustments as a result of the limited amount of exploration that has taken place in the Baltimore Canyon?

Mr. KALTER. When we look at the USGS resource estimates, we raise the same question that you are raising with them and they went back and reviewed the data and came back to us with new resource estimates for Baltimore Canyon which we have used in this exercise. Generally, those estimates, as opposed to the early 1974 estimates, give more prominence to gas than to oil and substantially reduce the expected oil production from Baltimore Canyon.

Mr. HUGHES. How much of a role do you play; how do you interface with Interior in determining a leasing schedule?

Mr. LANGENKAMP. Well, pursuant to the memorandum of understanding that was reached, entered into in September of last year, we prepare and submit, as the drafts were completed, informally, each chapter of the production goals to the Department of the Interior and then when the production goals were completed they were submitted formally. The formal submission has taken place. Informally, it has gone on over a number of months, and included in that informal interaction were a number of briefings by Bob Kalter and Bob Lawton on the DOE staff with the Interior and they have been aware for some time on what our position is and as Heather Ross indicated, they appear to be giving it due consideration.

Mr. HUGHES. So that actually what you do is recommend and then Interior considers?

Mr. LANGENKAMP. That is correct. We make a recommendation and we give our analysis and frankly our analysis has the force of its inherent logic and nothing more and we found that the Interior has been—we will not say that we agree with them in all aspects

regarding these matters of pace and speed and so forth. We found them very receptive to the ideas and the data that we submitted.

Mr. HUGHES. Did you have any recommendations to submit to the Department of the Interior with respect to lease sale 49?

Mr. LANGENKAMP. No, we made no recommendations. The recommendations that I was discussing this morning are the new lease schedule rather than the old lease schedule.

Mr. HUGHES. Are there some differences—the differences that you referred to with the Department of the Interior, could you be more specific as with regard to their lease policies?

Mr. LANGENKAMP. You heard this morning that the options that were presented to the Secretary, Department of the Interior, ranged from six lease sales down and our production goals indicate seven sales are an optimum so that would indicate some slight difference in approach.

Of course, we have to make certain allowance for the fact that it is the Department of the Interior that has to handle this problem from an administrative standpoint and try as we may to determine what the administrative burdens are and what the hassle is of trying to complete in good order six sales versus seven or more, that their judgment on that point is certainly something we cannot override. We still feel that the seven-sale scenario is possible and would be preferable and I think in a nutshell that would—that sets forth the difference in perspective.

Mr. HUGHES. It is not a major difference?

Mr. LANGENKAMP. I do not think it would be considered major. We have not seen the recommendation, we have not seen the position that the Secretary of the Interior has taken. I am taking the high range of his options, the difference between the high range of his options and what we feel to be the optimum number of sales is not an overwhelming difference.

Now, it may be that they pick a different range.

Mr. HUGHES. What do you think the experience from lease sale 49 shows?

Mr. LANGENKAMP. Well, it is disappointing. I think what I would prefer to do is——

Mr. HUGHES. That is probably the understatement of the year; \$41 million is traveling money.

Mr. LANGENKAMP. Well, I think that it is true. Also, I do not view these lease sales necessarily as a budget balancing operation. I am far more disappointed by the lack of interest in the fact that major companies and independents and so forth involved in this process did not have very much confidence in hydrocarbons. The number of dollars is important to us but I think the disappointing fact is it indicates that there is not much there in the way of hydrocarbons.

Mr. HUGHES. Do you think that that is what it indicates or do you think it might indicate that the industry did not have enough time to analyze the results from the first sale?

Mr. LANGENKAMP. Let me refer to Bob Lawton who is an older hand in the leasing business and let him give us his opinion on it. I do not know really whether or not I would have an opinion off the top of my head.

Mr. LAWTON. Mr. Congressman, I think you have to look at the work that was done out there, realizing that most of it is proprietary information. Geological Survey does get all results from work done, the drilling, the testing, everything. They have that information. Significant tests such as the ones run by Texaco in their potential gas discovery, Geological Survey actually has members on site when those tests are run. So they know what comes out of this. But the companies themselves do not release this information, the detailed information, to other companies. For the nine dry holes that were drilled, I think there is pretty good assurance that they were actually dry. I do not think it is an act that somebody is misleading somebody else. Geological Survey does know the results. We do not. But we take their word that they were dry.

This is not favorable to the area, especially the large stone dome, the one that Mobil drilled, it was supposedly on the highest portion of that structure.

Indications are that they absolutely found nothing. So it is not the fact that they did not have time to evaluate. It appears now that in at least nine of the wells drilled there was basically nothing to evaluate.

Mr. HUGHES. Would you not say it would be remarkable indeed if each of the companies that have sunk wells on structure had found oil the first time; that would be remarkable would it not?

Mr. LAWTON. Yes.

Mr. HUGHES. I believe there are a couple of rigs right now in the Middle Atlantic, and we have completed nine wells, have we not?

Mr. LAWTON. Well, there have been nine dry and abandoned. There are two being tested by Texaco and six more—no, excuse me, the apparent discovery by Texaco is being tested by an offset and then six more drilling.

Mr. HUGHES. Then you had to add to that the COST well off structure that showed a significant find of hydrocarbon. So roughly out of a total of 10 that have been completed, you had 2 finds. That is 2 out of 10. That is still pretty good odds, is it not? Isn't the usual rule of thumb that you will have about 12 dry holes before a significant find is made. Is not that the usual assumption?

Mr. LAWTON. The general rule of thumb historically has been 1 out of 10.

Mr. HUGHES. One out of ten?

Mr. LAWTON. So that is a good average.

Mr. HUGHES. That is still remarkable, 2 out of 10, one off structure. When you consider that Prudhoe Bay, there were what, dozens of wells sunk before there was a find and it was on the last one that there was a significant find; and in the North Sea the number of dry holes was even greater. There were a number of wells that were sunk before there was any significant hydrocarbon finds.

Mr. LAWTON. Well, actually the potential discovery you have now and the COST well, but again we do not have that information. We understand that those were classified as significant gas shows with potential proof.

Mr. HUGHES. That is, the significant gas show is a pretty good sign?

Mr. LAWTON. There is no indication until you go in and actually set the pipe and do your testing. I do not know to what extent they did test the wells, whether it was by drill stem testing, just core samples, or what.

Mr. HUGHES. They could not have found much more because under the existing regulations of the Department of the Interior they had to cap it and move the rig off.

Mr. LAWTON. For the COST well yes, sir.

Mr. HUGHES. So there was no effort to try to find out any more about it. It seems to me to be ridiculous.

Mr. LAWTON. As to the Texaco discovery they did release information on their first well and it indicates they have considerable gas potential. Whether it is commercial at that distance offshore, at that depth, no one knows at this time. We do not know anything on the confirmation well which is located a mile and a half away. So we do not know to what extent that reservoir extends, if it does. This will have to be determined.

Mr. HUGHES. Did you participate at all in the decision that was made by Interior to insist upon present regulations that indicate that when there is a find in a COST well, that automatically—

Mr. LAWTON. No, we have nothing in that.

Mr. HUGHES. Does that disturb you at all? Here we are, a country trying to inventory as best we can oil and gas resources and lo and behold we make a find; we do not know very much about it. There was something like \$6 or \$7 million that was put in the ground by those—that consortium of companies and yet our regulations indicate that they have to at that point stop, move the rig off, and not try to determine a little more about the structure than they did. The company conceded that they could have found more, that is the operating company, information about that particular structure if they had continued their operation.

Does that make sense to you?

Mr. KALTER. Now, Congressman Hughes, you are referring to the proposed regulations for onstructure drilling?

Mr. HUGHES. No, I am talking about the regulations that are presently in place which require the operator of that particular lease to cap the well and move the rig off. Here is a rig in place. Apparently they had gone down just short of the target point and presumably if the company felt that it would have been prudent to even go beyond that, since they had the rig in place, they could have requested permission. But the regulations made it advisable to cap the well.

Mr. KALTER. Congressman Hughes, we had a COST well in California that struck hydrocarbon at a shallow depth. It is my understanding that the regulations permitted that well to continue beyond the horizons where they found the oil in the shallow zones and drill on down. I am not sure exactly of the regulations that you are talking about that force men to pull off before doing full testing.

Mr. HUGHES. I believe it was a practical matter as much as anything because I think existing regulations require that the consortium make that information available to the public; so obviously they are not going to continue to discover additional information if they have to share it with the world.

Mr. KALTER. The Interior Department has to make a press release of a significant finding of oil and gas and the actual core hole information is not released for 5 years or 60 days after a sale within 50 miles, whichever is sooner. So assuming that there was no sale within 50 miles of that site, within 5 years they would have to release it.

I think the point that you are making to the Interior Department in the prior testimony was that perhaps that 5-year period was not even sufficient if you want to do on-structure drilling given the length of the leasing schedule. That is a factor that has concerned the Department of Energy. I have verbally discussed with the Department officials and suggested that we give careful consideration to changing that particular timing when the new regulations for on-structure drilling come out.

They have come out proposed at this point with essentially repetition of the old rig but that does not mean that it cannot be changed.

Mr. HUGHES. That is progress. Thank you.

Let me ask you the state of the art right now in trying to determine industry's ability to assimilate new leases, capital restraints and equipment restraints which I touched upon with the Department of the Interior.

How are we coming along in trying to develop an independent data base so that we can make some proper judgment values in 5 years?

Mr. LANGENKAMP. Let me state generally to that. I do not think we should underestimate the impact that the Government has on the ability of the private companies to respond in terms of financing drilling rigs. We have statistics on the number of rigs under construction now. We have 52 rigs, including 42 jack-ups, from the section of the country that I come from, Oklahoma. I know that these rigs are built with borrowed money, regardless of the size of the company. They are built on the expectation of the company, the expectation of their board and the expectation of the bankers that are involved, and what we do here with regard to scheduling these lease schedules has a tremendous effect on it. Beyond that, the production goal document, which we submitted for the record today, goes into these questions of the capability of industry to respond. A number of rigs in the last 5 years has doubled.

I think that we are starting at the wrong end of the problem to anticipate problems of manpower and material. I think we should be looking at how the Government can make it possible to respond and have some confidence in the industry to meet the need with regard to these things.

Mr. HUGHES. Let me interrupt you. I do not know that we are starting at the wrong end of the spectrum. The problem has been that that end of the spectrum has been ignored.

Nobody is suggesting that we ought to start with what the manpower or availability is. I think we have thrown a lot of acreage at oil companies in the past and never looked at the other side of the balance sheet.

Mr. LANGENKAMP. You cannot ignore the question of the capability of industry to respond. The production goal document that I referred to spent over 100 pages going over this problem. The

National Petroleum Council is doing a study on manpower and material availability of the industry, including onshore and offshore and so forth. So we are not underestimating the problem, but one of the aspects that we are really not concerned with here, economics, and economics is more than just availability of the leases, needless to say. If you went to the industry and you said, well, now, we make this many leases available, can you respond? The question is a qualified yes, assuming that the economics are there.

Mr. HUGHES. How much of a role do you expect to play in trying to prioritize leasing? Obviously, if we acknowledge that we have certain limitations in trying to bring on a number of different frontier areas and still try to do a good job in exploring structures in the Gulf of Mexico and other areas where we know we have high probability of finding additional hydrocarbons, how much of a role are you going to play in trying to prioritize leasing schedules so that we get over the business of what is in frontier areas but, at the same time, not make ourselves so thin in areas that we have high probability of hydrocarbons. We may see the net result being less oil and gas for this country?

Mr. LANGENKAMP. Well, the problem of prioritizing, as you are aware, is extremely complex. You have to analyze the Department vis-a-vis the available rigs. You have to analyze the price. Our scenario showed, if you used the \$23 price, that lease sales in Alaska are more attractive because of the increased cost in drilling in Alaska as opposed to the Gulf of Mexico. All I can say is that the Department of Energy has spent a lot of time going into these variables and constraints, and our production goal set forth a scenario which we think will work given these various pricing assumptions in these various areas.

Taking into consideration all these constraints, we are hoping that this study that we have done will be carefully reviewed and will continue to try to give support to the Department of Interior on the scenario and the sequence of these leases and the very difficult tradeoffs that they have to make.

Mr. HUGHES. Finally, do you support the present proposal that the Department of the Interior make permits available to industry to adopt onstructure stratigraphic testing?

Mr. LANGENKAMP. Yes, we support it.

Mr. HUGHES. Thank you. I have never had such candor.

Mr. Walsh, I do not mean to neglect you or Mr. Whiting. Mr. Studds said he was extremely disappointed about a few things. I want to tell you that I am less than enthusiastic about what has happened to the State grants

I remember, and I am sure Mr. Belsky can remember, too, discussions in the last Congress about the funding level and, the authorization for CEIP and the Office of Management and Budget made a big thing about trying to keep it at \$100 million. Well, on reflection, it looks like if we could have gotten a commitment from OMB that they would have provided half of that, we would have been well off.

We authorized \$130 million, and I understand OMB recommends no funding whatsoever for the State grants. Is that correct?

Mr. WALSH. Just the administrative grants?

Mr. HUGHES. I am talking about all the coastal energy impact programs.

Mr. WALSH. The formula grants—we are recommending funds for that, Mr. Hughes.

Mr. HUGHES. What is the funding level?

Mr. WALSH. \$27 million. We have a carryover which brings us to about \$41 million total.

Mr. HUGHES. I would like to now refer to the State participation grant.

Mr. WALSH. That is a different section, and that section relates to planning activities and participation by the States, in all elements of the leasing decision, that is the decision with regard to tract selection and exploration, and finally exploitation. The administration has not requested the funds for that.

As you know, there are \$5 million authorized for that purpose, but we have not requested funds for that.

Mr. HUGHES. I see. So that my information was not correct? The administration is recommending \$27 million for the energy impact program, while the State participation grant program is not being funded at all?

Mr. WALSH. There are two parts to the coastal impact. First is the formula grants which are available to States that are directly affected by actual leasing and landing.

Mr. HUGHES. What is that funding level?

Mr. WALSH. The funding level there is a total of \$41 million at the present time. The second part is the loan account, and we have at the present time \$157 million available in that account.

Mr. HUGHES. What is the recommendation of OMB for the coastal zone management program?

Mr. WALSH. The program itself?

Mr. HUGHES. Yes.

Mr. WALSH. Total funds for the coastal zone management, I believe it is around \$40 million. Let me supply that for the record. My recollection of the basic program, that is the 306 program, that is for each of the States, is around \$40 million. Let me supply that for the record. My memory is probably not very good on it.

Mr. HUGHES. What is it that you requested from the administration. What was the recommendation of the Department of Commerce for the coastal energy impact fund?

Mr. WALSH. What was our recommendation?

Mr. HUGHES. Yes, to the OMB.

Mr. WALSH. If I could, I would like to supply that for the record. We do have set forth exactly what we have requested for each of these programs to the Department of Commerce, and then what the Department of Commerce requested from OMB, and then the President's budget level. Let me supply that for the record again. I cannot recollect it now.

[The following was received for the record:]

FY 1980 BUDGET RECOMMENDATIONS--COASTAL ZONE MANAGEMENT*

Sections	NOAA Request	DOC Request [\$000]	OMB Request	Actual Appropriated
306 (program administration)	42.012	27.212	27.212	27.212
308 (b) (formula grants)	43.680	43.680	27.750	27.750
308 (c) (1) (planning grants)	3.500	3.500	3.500	_____
308 (d) (4) (environmental grants)	1.500	1.500	_____	_____
308 (d) (1) (loans)	156.700	_____	_____	_____

*Data supplied by National Oceanic and Atmospheric Administration, Department of Commerce.

Mr. HUGHES. Thank you.

Finally, Mr. Whiting, I want to thank you for your testimony and it is encouraging to see that you are moving along, too, rapidly with regulations.

Mr. Forsythe?

Mr. FORSYTHE. Thank you, Mr. Chairman.

The chairman referred to lease sale No. 49, the gulf, and the disappointing results of the lease sale bids.

Do you have any concern over this situation, which may have been caused by administrative delays in the implementation of the new act.

Mr. LANGENKAMP. I do not believe that reflects any suspicion that we have.

Mr. FORSYTHE. That seems to me unreal. It seems to me that there has to be a concern on this part of industry since they do not know what the regs are going to be. You cannot give them encouragement toward putting up a lot of money in a sale at this particular time. But thank you for that answer.

Back to the 5-year lease schedule, and again the chairman has discussed this with you in terms of meeting the goal of accelerated production schedule.

Does this not more and more confirm, if we are not only going to meet the goal of high production, but also a spread of exploration over the new frontier, that any diminution is going to seriously affect the ability to do those things simultaneously?

Mr. LANGENKAMP. We think the—as set forth on table 3 that a reduction from seven, six, five, four sales a year, regardless of what you do with the Gulf of Mexico, within that group of sales will have a substantial impact on either gas production or oil production or both.

Mr. FORSYTHE. If you are going to keep up the broad scale exploration in the gulf, you cannot do it with sales. You are going to reduce your potential from the already known areas in the gulf.

Mr. LANGENKAMP. That is correct, and I think one thing that ought to be taken into account, we have been forced to utilize the—such data as is known regarding these areas, but these are frontier areas, and I think this is the—this is the explanation for at least the most recent lease sale No. 49. Once you have a number of wells drilled and the quantity of information available to those who are knowledgeable is increased by a quantum leap and we are talking here in the frontier areas about relatively sketchy information, and we should never forget that it is sketchy until the first number of—first series of wells are drilled and, therefore, we think it is very important that you get some of those wells drilled and you maximize the number of sales to do that.

Mr. FORSYTHE. It seems to me if it were possible, even more might be in the optimum.

Mr. LANGENKAMP. I would agree.

Mr. FORSYTHE. I am trying to reaffirm what you have recommended in terms of your studies and then, hopefully, the Department of the Interior will give added consideration to your recommendations as a result of these hearings. Because as we do fall

back at all, we are going to rue the day, it may be 10 years down the road before any of this comes on.

Mr. LANGENKAMP. Let me dramatize that, Congressman.

If you look at the seventh sale versus the sixth sale scenario and assuming that you go to the Gulf of Mexico six times in those sales, the difference is 400 million barrels based on this calculation. Four hundred million barrels, you know, based on that one change alone is about one-half of the reserves in the Elk Hills Naval Petroleum Reserve. These are substantial quantities.

Mr. FORSYTHE. And at the same time there is a dramatic falling off of existing leases in the gulf just because of the age and the depletion of the total resource in the existing leases?

Mr. LANGENKAMP. That is correct.

Mr. FORSYTHE. So you have a downturn that we are fighting if we are going to gain in overall production. These are the kinds of things that have to be given high priority in the Nation as we look at them.

Mr. LANGENKAMP. We find that when industry representatives come in and talk to us, and we say what are we doing wrong, and they give us a long list of items, many of which we discount, one, of course, is the pricing issue, but one of the persuasive arguments, and we hear it over and over the little guy as well as the majors, and that is the lack of available lands and they give us these charts showing that in 1930 you did not have to fool with the Government because of the access of lands, but you are required to go to these frontier areas, offshore lands, and so forth, and we hear this at a significant number of intervals.

I believe that it does constitute a constraint, and if the country is to resolve the supply problem, we have to be aggressive with regard to onshore and offshore Federal leasing.

Mr. FORSYTHE. Thank you.

Mr. HUGHES. Thank you, Mr. Forsythe.

On the lighthearted side, I asked you if you had factored into that computer model OMB's need to reduce the budget deficit in the years ahead, and I am curious, and cannot resist my urge to ask you what changes were made by OMB that required a redoing of the entire statement that you gave here today?

Mr. LANGENKAMP. I think it is always fun to blame others and particularly fun to blame OMB for things, but I think probably we are here in the Department of Energy to take the rap for the delivery date on this, Congressman, because this statement was not controversial and it was not substantially rewritten.

Mr. HUGHES. We are not going to be critical of that.

But my question is specifically what changes did OMB recommend?

Mr. KALTER. Since I was the person on the end of the telephone last night, just extremely minor additions pointing out that some of the factors involved in the production goals were due to assumptions and this type of thing, very trivial additions and changes. I do not know, I am not sure where you get the word that OMB rewrote the statement, but that is incorrect. Probably the reason for the statement being so late is we were notified on Monday that the hearings were going to be on Thursday.

Mr. HUGHES. Were any changes made in the tables?

Mr. KALTER. No.

Mr. HUGHES. There were not? OK.

Mr. Kitsos.

Mr. KITSOS. I want to make certain that we have the State participation grant situation clear.

NOAA recommended some funding but the Department of Commerce did not forward it. Now, the Secretary of Commerce will respond in a letter to Chairman Murphy that some effort will be made to restore that funding. Is that correct?

Mr. WALSH. That is correct.

Mr. KITSOS. Now, if it is not possible to obtain the funds from the President's budget, it is possible, as indicated in the statement I read from the Commerce Department, to perhaps reprogram money. Reprograming would require, as your statement points out, authorizations or approval from the House and Senate Appropriations Committees and OMB. That money would come from the loan fund. Is that right?

Mr. WALSH. Well, it would probably come from there—it is probably the only place that we can get that amount of money and move it out without real substantial interference. But the loan account is where we are looking at. There is a serious policy issue as to the conversion of funds in the loan account and into a grant account, and that issue has not been fully resolved.

But that is the place where we are looking to possibly find a source of funds for this provision.

Mr. KITSOS. Do you know how much money is in the loan account now that has not been expended?

Mr. WALSH. Well, I mentioned that we have about \$174 million in 1979. We have applications being processed for the use of approximately \$67 million, and therefore during 1979, this fiscal year, available for reprograming we have \$110 million.

Mr. KITSOS. I see. OK.

Thank you, Mr. Chairman.

Mr. HUGHES. OK. Thank you.

I want to thank the witnesses, Mr. Walsh, Mr. Whiting, and Mr. Langenkamp, for their testimony today.

This hearing will now recess to reconvene on March 14 at 1:30 p.m. I might request Mr. Whiting, prior to that time, prior to March 14, if you can submit to this committee some summary of your findings with respect to the fire that has taken place in the gulf. That is one of the things that will be taken up at our next hearing.

At the next hearing we will hear from industry officials as well as the Coast Guard, and at this time the hearing will be recessed.

[Whereupon, at 1:21 p.m., the committee recessed, to reconvene at 1:30 p.m., Wednesday, March 14, 1979.]

[The following material was supplied for inclusion in the printed record:]



FLORIDA INSTITUTE FOR OCEANOGRAPHY
830 First Street, South, St. Petersburg, Florida 33701
Phone (813) 893-9100

March 5, 1979

Honorable John M. Murphy, Chairman
Ad Hoc Select Committee on the Outer Continental Shelf
Room 3383, House Annex No. 2
3rd and D Streets, S.W.
Washington, D.C. 20515

Dear Mr. Chairman:

The State of Florida appreciates the opportunity to comment on the OCS Administrative Grants under Public Law 95-372. We are presently allotting State resources for two and a half man years to participate with and supply information to the Department of the Interior (DOI) for OCS activities. To date the State has not received any money from OCS operations, nor does it appear it will for several years.

Under Public Law 95-372 the State of Florida will be participating in two OCS regions - the South Atlantic and the Gulf of Mexico. Florida has one of the largest coastlines associated with OCS activities. These factors will create a work load, which is two or more times greater than that experienced by other coastal states. Further, its OCS operations are in frontier areas. Its citizens have concerns on the effect of these OCS operations on the State's tourist economy, which is dependent upon its environment. Therefore, the State feels it must participate to the maximum in OCS matters.

The State of Florida has carefully analyzed the contents of Public Law 95-372 and its requirements for state participation with the Federal Government. This participation will require the resources of additional State agencies and cooperation and coordination with county and local governments. The State, therefore, has a real need for funds to support its OCS activities. It has repeatedly stressed the need for Federal money to support these operations until OCS revenues are available to the State. We strongly support the funding requested under Public Law 95-372 under CEIP to support state OCS Administrative Grants.

AN AFFIRMATIVE ACTION EQUAL OPPORTUNITY EMPLOYER

University of Florida
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Florida State University
Tallahassee

Florida A. & M. University
Tallahassee

University of South Florida
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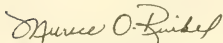
University of North Florida
Jacksonville

Florida International University
Miami

Honorable John M. Murphy
 March 5, 1979
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We presently have a grant under CEIP 308(c) funds to support the State of Florida OCS representative. However, this is deleting available money that should be used for shore based OCS planning purposes. We solicit the Ad Hoc Select Committee support in generating Federal funds for OCS operations.

Respectfully submitted,



Murice O. Rinkel
 State of Florida OCS Representative

MOR/rvf

cc: Mr. W. Kolb
 Mr. K. Woodburn



Office of the Governor

Atlanta, Georgia 30334

George Busbee
GOVERNOR

November 22, 1978

Norman Underwood
EXECUTIVE SECRETARY

Honorable John M. Murphy
Chairman
Ad Hoc Select Committee on the
Outer Continental Shelf
U.S. House of Representatives
Washington, D.C. 20515

Dear Congressman Murphy:

Thank you for the invitation to appear before your committee during your oversight hearings on the implementation of the Outer Continental Shelf Lands Act Amendments of 1978. Regrettably, my schedule will not allow me to take advantage of this invitation. I would like, however, to make a few comments which I hope will be of some use to your committee.

First, let me commend you and your fellow committee members for your work in achieving passage of the 1978 Amendments. I think the attitudes and interests expressed by the Congress in the early drafting of those Amendments were largely responsible for the successful sale of leases in the South Atlantic last March. As you know, that was the first OCS lease sale in the Atlantic frontier area to be held without a legal challenge. I felt that our major concerns would be adequately addressed in the forthcoming legislation and it is gratifying to see that my confidence was well placed.

Although there have been very few regulations promulgated to date to implement the Amendments, I would like to comment on some of the recent activities which have taken place. Probably the most disturbing event was the temporary suspension of certain provisions of 30 CFR 250.34 by the U.S. Geological Survey (USGS) on November 1, 1978. This suspension essentially eliminated the provision guaranteeing my right to review and comment on Exploration Plans and their accompanying Environmental Reports filed by South Atlantic operators. As you know, coastal communities in frontier areas have no experience whatsoever with the offshore oil industry.

Honorable John M. Murphy
November 22, 1978
Page Two

The location of onshore support bases for exploration will have not only an immediate impact on coastal communities but also a direct bearing on the eventual location of permanent bases during development and production. I therefore feel very strongly that the state and local governments should have an opportunity to comment on proposed Exploration Plans. I think it is a serious oversight that the 1978 Amendments do not specifically provide for Governors to comment on exploration plans.

Section 26 of the Amendments provides for an OCS Oil and Gas Information Program. This would provide the states with vitally needed planning information on an ongoing basis and lend consistency and coherence in the flow of information which the individual exploration and development/production plans cannot provide. In anticipation of this mandated program, USCS issued a final rule on January 27, 1978, (30 CFR 252) establishing an information program.

Almost a year later there has been no implementation of even a basic program and my understanding is that we are still several months away from one. The USGS is conducting a series of workshops directed at compiling the onshore and nearshore information needs of the coastal states. The Bureau of Land Management and the Office of Coastal Zone Management conducted a similar assessment of needs during 1976 which involved considerable time and effort on the part of the states. I would think that the results of that study would be more than sufficient to at least initiate some form of Information Program.

Another aspect of the Amendments which I would like to discuss concerns the environmental studies required by Section 20. You may be aware of a letter I wrote to Mr. Frank Gregg, Director, Bureau of Land Management, last March regarding a proposed lease sale (No. 54) on the Blake Plateau. In that letter I requested a suspension of the planning process for the sale pending further environmental analyses. At that point, there was a severe paucity of scientific data pertaining to the Plateau.

Section 20 of the Amendments requires environmental studies to commence at least six months prior to the holding of a lease sale. I sincerely doubt that the environment of such an ecologically complex system as the Blake Plateau can be adequately studied in so few months. Data should be collected over several seasonal cycles to ensure validity and provide ample time for assessment before any irreversible decisions are made.

Honorable John M. Murphy
November 22, 1978
Page Three

I note that in response to the Amendments' requirement for a Five Year Leasing Program, the Department is soliciting comments again on the Blake Plateau. Since I am unaware of any new studies on the Plateau since my letter last March, I will be essentially repeating my comments. I would hope that eventually procedures are adopted, particularly in frontier areas, whereby adequate environmental studies are commenced and completed well in advance of key decisions and that the results of the studies are used to provide a prudent basis for proceeding with the schedule. I am not confident that Section 20 as now written will foster this type of approach.

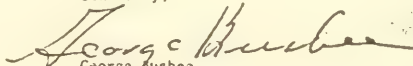
The final comment I would like to make concerns Section 503 of the Amendments, Outer Continental Shelf Grants. The states have many responsibilities if they are to seriously participate in developing the oil and gas resources of the OCS. It is gratifying to see that Congress appreciates the financial burden this places on state and local governments. It is somewhat perplexing, however, to find that the states' eligibility for these grants is contingent upon their satisfactory participation in the Coastal Zone Management program, a program under the administration of the Department of Commerce, not the Department of the Interior.

If oil and gas development were allowed only off the coasts of states with approved or pending Coastal Zone Management Plans, then the grant restrictions might be so warranted. But in reality, every state potentially affected by offshore development must have some form of an ongoing OCS coordination program to keep up to date on the environmental studies program, proposed lease sales, etc., regardless of its CZM program effort. The states also perform a valuable public information service for the Department of the Interior and the oil and gas industry in keeping their citizens and local governments apprised of the program. I think it is an injustice to penalize states who for one reason or another choose not to participate in the CZM program. Such a penalty certainly places them at an unfair disadvantage in trying to protect the interests of their citizens.

In summary, let me again thank you for the opportunity to comment on the new Amendments. Everyone who has worked so hard for their passage can take great pride in the final achievement. I hope my comments will be useful for your purposes.

With kind regards,

Sincerely,


George Busbee

GB:jbr

cc: Honorable Bo Cinn
Honorable Cecil Andrus



Department of Energy
Washington, D.C. 20461

APR 12 1979

Honorable John M. Murphy
House of Representatives
Washington, D.C. 20510

Dear Mr. Murphy:

This letter responds to a question posed by Mr. Belsky of the committee staff during the hearings held on December 7, 1978, by the Ad Hoc Select Committee on the Outer Continental Shelf. The question appears on page 290 of the hearing transcript and pertains to the fee of up to three cents per barrel on crude oil obtained from the Outer Continental Shelf. Pursuant to the Outer Continental Shelf Lands Act Amendments of 1978 (Section 302(d)), the fee would be levied by the Secretary of Transportation and collected by the Secretary of the Treasury for deposit in the Offshore Oil Pollution Compensation Fund. On December 4, 1978, the Coast Guard issued proposed regulations (F.R., Vol. 43, No. 233) that would implement its authority to levy the fee. Specifically, Mr. Belsky asked whether producers of crude oil from the Outer Continental Shelf could add the amount of the fee to the lower or upper tier ceiling prices for any first sales of domestic crude oil that are subject to ceiling prices.

Under the Mandatory Petroleum Price Regulations set forth in 10 CFR Part 212, producers of crude oil can not recover any fees collected on domestic crude oil for deposit in the Offshore Oil Pollution Compensation Fund by charging prices which exceed the lower or upper tier ceiling prices for any first sales of domestic crude oil established according to the provisions of 10 CFR 212.73 and 212.74. The Department of Energy Regulations do not permit the addition of any costs to the lower or upper tier ceiling prices applicable to first sales of domestic crude oil.

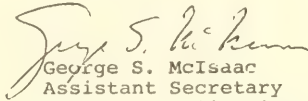
I have enclosed two documents ("Evaluation of Profit Share Leasing Systems" and "Evaluation of Royalty Provisions for OCS Leasing") which were requested by the committee. As

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indicated at the hearings, we have delayed this response until all of the information was available and complete.

I hope that this information is helpful to you. If you or your staff have any questions regarding this matter, please contact Robert Kalter at 633-9421.

Sincerely,


George S. McIsaac
Assistant Secretary
Resource Applications

Enclosure

EVALUATION OF ROYALTY PROVISIONS FOR OCS LEASING

by

Wallace E. Tyner

Introduction

Collection of royalty on resource extraction has been practiced for centuries. The term royalty originally signified the crown's share in the output of mines.¹ In the context of this paper, royalty is defined as the share of oil and gas which is paid to the government as part of the terms and conditions for a lease on the Outer Continental Shelf (OCS). Historically, a number of different royalty provisions have been used for OCS leasing:

- (1) A fixed royalty rate of 16.67 percent with cash bonus bidding
- (2) A higher fixed royalty rate ranging from 33.33 to 40.00 percent with cash bonus bidding
- (3) Royalty bidding with a nominal bonus
- (4) Royalty bidding with a higher fixed bonus
- (5) Cash bonus bidding with a sliding scale royalty in which the royalty rate in each period is a linear function of the value of production

Other possible royalty systems include sliding scale royalty with a non-linear relationship between the value of production and the royalty rate and combination royalty and cash bonus bid systems in which the royalty rate is the bid variable up to a fixed level after which cash bonus becomes the bid variable.

¹ McDonald, Stephen L. The Leasing of Federal Lands for Mineral Fuels Production (unpublished draft), written under a grant from Resources for the Future, January 1978.

Purpose

The purposes of this paper are to compare alternative royalty systems, to describe the differential effects of each system and to formulate policy recommendations for royalty provisions in future lease sales. There is nowhere in the leasing literature a comprehensive evaluation of alternative royalty systems. Furthermore, most of the theoretical work which has been done on royalty systems has assumed fixed production capacity. Yet changes in capacity induced by alternative royalty provisions may be as great a source of inefficiency as non-development or early abandonment impacts discussed widely in the literature.² Hence, this paper will examine alternative royalty systems in a capacity optimization framework. The GEN2 leasing simulation model developed by Kalter and Tyner will be used for all policy simulations.³

Scope of the study

It is important at the outset to define the scope of this paper. The paper will provide both a theoretical and empirical comparison of the royalty systems mentioned above. The analysis will be conducted over a wide range of reserve sizes, but initially price and cost variables will be held constant. In designing the study, it was postulated that changes in price

² For example, early abandonment due to royalty is discussed in Leland, Hayne E., Norgaard, Richard B., and Pearson, Scott R., "An Economic Analysis of Alternative Outer Continental Shelf Petroleum Leasing Policies," prepared for the Office of Energy R.&D. Policy, National Science Foundation, September 1974.

Non-development and production prolongation are discussed in Kalter, Robert J., Stevens, Thomas H., and Bloom, Oren A., "The Economics of Outer Continental Shelf Leasing," American Journal of Agricultural Economics 57, No. 2 (May 1975), pp. 251-258.

³ Tyner, Wallace E. and Kalter, Robert J., "A Simulation Model for Resource Policy Evaluation," (revised version), Cornell Agricultural Economics Staff Paper No. 77-28, September 1977.

or cost assumptions would affect the values of parameters and minimum and maximum royalty values used for the systems but would not alter the general direction of the conclusions of the analysis. This hypothesis was tested by expanding the analysis to include alternative price and cost assumptions, and the results generally verified the initial hypothesis. Detailed results of the price and cost sensitivity analysis are included in the Appendix.

This study also ignores the bid formation process. We assume that the bonus bid is equal to a fixed fraction of after tax net present value (ATNPV).

Organization

This paper is organized into four parts and an Appendix. Following this introduction, a theoretical analysis of alternative royalty systems is developed. This section includes a general theoretical background plus a discussion of the theoretical implications of fixed royalty, sliding scale royalty and royalty bid systems. The third section provides the results of leasing simulations on each royalty system, and the fourth section presents conclusions and policy recommendations. Detailed results of sensitivity tests are provided in the Appendix.

Theory of Royalty Provisions in Leasing

The major effect of royalty which has been discussed in leasing and general resources literature is the early termination problem. According to the theory, production may be terminated earlier than with no royalty because the rising marginal cost (MC) curve intersects the marginal revenue (MR) curve sooner. Sliding scale or diminishing royalty has been suggested as a means of alleviating the early termination problem. Other than these two points, the leasing literature is largely silent on the impacts of

alternative royalty systems.⁴ In this section we explore some of the theoretical background for the empirical analysis which follows.

Problems with the current leasing system

Before launching into the theoretical discussion it will be useful to provide some general background information. The major reason for the recent interest in alternative leasing systems is the widespread belief that the cash bonus leasing system does not result in the government's capturing fair market value for its resources.⁵ Receipt of fair market value is one of the three major objectives of government leasing policy.⁶

The current cash bonus system is believed to be defective for two major reasons. First, because of the high degree of uncertainty in oil and gas prospects and because of the large amounts of money involved in cash bonus bidding, it is believed that companies discount bids to account for the high risk.⁷ To the extent that the winning cash bonus bid is less than the expected value of a lease, a higher value could be obtained by the government if a leasing system were used which better shared the risk. Theoretically, systems which place greater weight on contingency payments

⁴ The paucity of research on alternative systems is partially due to the fact that concern with alternative leasing systems is relatively recent. In fact, some of the alternative royalty schemes discussed in this paper do not appear anywhere in the leasing literature.

⁵ As a manifestation of this belief, a group called Energy Action Education Foundation is contesting the legality of OCS Sale No. 45 on the basis that the public did not receive fair market value (Oil and Gas Journal, May 1, 1978, p. 30).

⁶ The other two objectives are (1) orderly and timely development of the resource, and (2) protection of the environment. (Kalter, Robert J. and Tyner, Wallace E., "Disposal Policy for Energy Resources in the Public Domain," contained in Energy Supply and Government Policy edited by Robert J. Kalter and William A. Vogely.

⁷ Hence, companies are believed to be risk averse in bidding for OCS oil and gas, at least at some bid level.

(royalty or profit share payments) share risk better because government collects revenue only if oil or gas is found and then only in proportion to the size of the discovery. Hence, government takes more of the risk and private companies bear less risk. With contingency payments a larger portion of total government revenue, it is argued that less risk discounting will be necessary by private companies.⁸ Hence, government revenue will more nearly approximate expected value of the lease, which for our purposes is defined as fair market value.⁹

Second, the current cash bonus system may fail to capture fair market value because competition may be limited by using the system. Because much of the government revenue from its resources comes in the form of cash bonus payments, the values of bonus bids may be very high--in the hundreds of millions of dollars. Such high "entry prices" may prevent a number of small companies from participating in OCS lease sales. Hence, competition may be reduced, and with inadequate competition, fair market value is unlikely to be achieved. It is argued that if the cash values required to win leases were lower, more companies would participate in lease sales thereby increasing competition. With more competition, receipt of fair market value would be more likely, ceteris paribus. Also, participation of more small companies in lease sales could result in more small companies winning leases which would mean a more diverse ownership pattern for OCS

⁸ Also, with contingency payments representing a larger fraction of total government revenue, the government is less vulnerable to government revenue reductions due to inadequate competition.

⁹ Government captures the economic rent which is the return to the resource in the excess of a normal profit. Hence, fair market value is the surplus after deduction of all legitimate costs and a normal profit.

oil and gas resources.

Fixed royalty systems

As mentioned above, the main problem with fixed royalty systems which has been discussed in the literature is the early termination problem which is illustrated in Figure 1. P represents market price, λ the royalty rate, and MC_0 the marginal cost associated with the installed capacity. With no royalty, production ceases at t^* , the point in time when

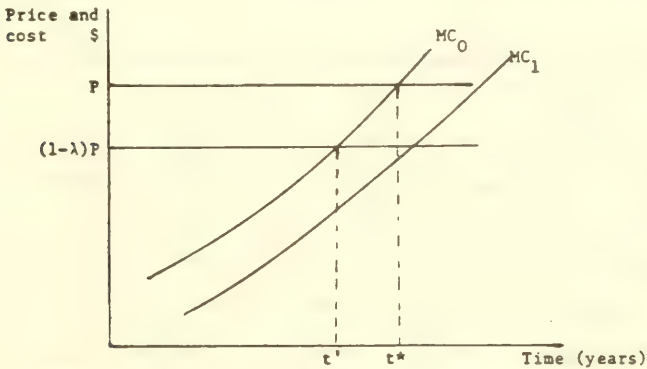


Figure 1. Production Termination With and Without Royalty.

$MC = MR = P$. However, with a fixed royalty in place, production terminates at t' where $MC = MR = (1-\lambda)P$. t' is less than t^* —hence the early termination conclusion of most early work on royalty. However, this conclusion is dependent on the (implicit) assumption that installed capacity is fixed. To the extent that installed capacity is variable, there exists a different MC curve for each possible capacity. A different size capacity may be chosen with a royalty in place than would be selected in the absence of a royalty.

To understand this, we can review the capacity selection process. For any given capacity the condition for maximizing profit is to equate the present value of net revenue streams in all periods as shown in equation (1):¹⁰

$$(1) R_1 - C_1 = \frac{R_2 - C_2}{(1+r)^2} = \frac{R_3 - C_3}{(1+r)^3} \dots = \frac{R_n - C_n}{(1+r)^n}$$

As capacity increases, MC generally decreases (assuming economies of scale) and production is shifted towards the present. Analogously, with a royalty, MR decreases and production may be shifted towards the future. Consider first selection of optimal capacity with no royalty. Starting with very low capacities, ATNPV rises at first as capacity increases because it pays to get the returns earlier (a larger investment produces the resource sooner). At some point, however, ATNPV reaches a maximum and begins to decline because no further investment is justified by the prospective returns. Curve V_0 in Figure 2 illustrates the process. Note that with no royalty, ATNPV equals the total government revenue from the resource exclusive of taxes (assuming ATNPV equals the bonus bid). With a royalty, equation (1) is modified as shown in equation (2):

$$(2) (1-\lambda) R_1 - C_1 = \frac{R_2(1-\lambda) - C_2}{(1+r)^2} = \frac{R_3(1-\lambda) - C_3}{(1+r)^3} = \dots = \frac{R_n(1-\lambda) - C_n}{(1+r)^n}$$

Because of the royalty deduction from net revenue, the annual net value streams are lower and ATNPV is reduced. The value and capacity curve V_1 is drawn for the situation with royalty. Because the annual net value

¹⁰ McDonald, p. 83.

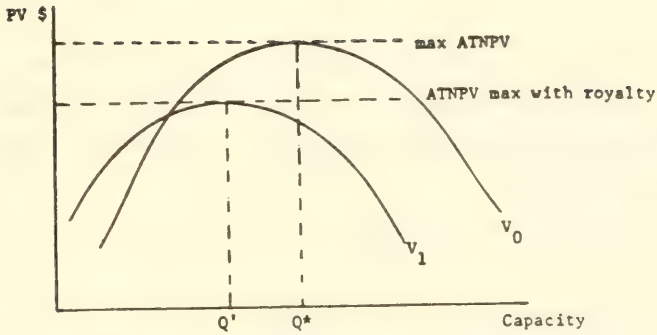


Figure 2. After Tax Value and Capacity Relationships.

stream is reduced, a lower capacity (Q') may be installed than with no royalty. Lower production capacity, of course, means a longer production time horizon (assuming the economic cut-off point is not reached).

Now we can relate this conclusion back to Figure 1 and the "conventional wisdom" on royalty impacts. To the extent that capacity is variable, imposition of a royalty (especially a high fixed royalty or a royalty bid) will likely result in reducing installed capacity and lengthening the production time horizon. This conclusion is the exact opposite of the "early termination" conclusion of conventional analysis. Hence, theoretically, we would predict that imposition of a royalty would result in lower capacity and longer production profiles. In the empirical analysis section, we will test this hypothesis within the real world with taxes and non-linear cost relationships.

A second effect of fixed royalty is the reduction in development of marginal fields. Fields that are just profitable with no royalty could not be developed after imposition of a royalty. (All potential investments

cost more than the present value of the net revenue stream.) Therefore, the size of the smallest field which can be produced increases. For higher fixed royalties, this effect can be substantial--resulting in non-development of large numbers of fields.

In summary, the two major effects of a fixed royalty which we can predict theoretically are:

- (1) Reduction in installed capacity and lengthening of the production time horizon.
- (2) Increase in the size of the smallest field which can be developed profitably resulting in non-development of numbers of small fields.

These effects would be accentuated with higher fixed royalty rates.

Royalty bidding

We will divide the discussion of royalty bidding into two parts. The first part concerns the efficiency impacts of a royalty bidding system once the bid is decided and exploration and development proceed. The second part concerns the bidding process and problems associated with speculative bidding when royalty bidding is used.

Once the royalty bid is decided, the royalty rate is fixed and the effects of the system are essentially the same as described above for a fixed royalty system. We need not repeat that discussion, but we can add that the effects would be magnified because the fixed winning royalty bid generally would be relatively high, and the degree of both types of fixed royalty impacts is a function of the level of the fixed royalty.

The second effect of royalty bidding has received the most attention in the literature. Because only a nominal cash payment is involved in royalty bidding, firms with little cash available can place bids, and firms may tend to "speculate" in bidding. In an analysis of OCS Sale No. 36

which included royalty and cash bonus tracts, Townsend and Gaskins concluded that royalty bid tracts did receive significantly more bidders and that royalty bidding did attract new bidders.¹¹ Speculation in the royalty bidding context means that a firm bids from its optimistic set of expectations regarding resources and value rather than bidding based on average (or mean and variance) expectations. For any prospect, a firm holds a range of beliefs about the quantity of reserves which may be found. Each bonus bid is presumed to be based on the average (or the entire distribution) of these beliefs because of the large amounts of capital which are risked in the bonus bid. However, in royalty bidding, little is risked, so firms may tend to base bids on the optimistic side of their beliefs. If a high royalty bid is placed, it is more likely to win (especially with the increased competition in royalty bidding). If less than the optimistic expectation on reserves is found, and it is not profitable to produce the field, the firm can simply give up the lease. The company loses only its exploration costs (and these are tax deductible). However, society loses the value of all the oil and gas which is not produced (or is delayed until it can be re-leased). Townsend and Gaskins conclude as follows:

Competitive [royalty] bidding drives royalty rates to levels that seriously erode the potential commercial value of a tract. With the introduction of royalty bidding, there appears to be:

- a marked increase in the probability that tracts will not yield commercial finds;
- an expected decrease in the ultimate recovery from any given commercial find

¹¹ Townsend, Ralph and Gaskins, Darius, of the Office of OCS Program Coordination, Department of the Interior. "An Analysis of the Royalty Bidding Experiment in OCS Sale No. 36".

On balance, royalty bidding could introduce broader industry participation on the OCS, perhaps even on a wider range of tracts. However, the risks involved are substantial in terms of the potential loss, or at least delay, of ultimate recovery from the OCS.

In summary, royalty bidding promotes competition but also speculation. Once leased, royalty bid tracts are developed the same as if they had been leased with a high fixed royalty. This means that large amounts of production can be lost or delayed.

Variable royalty

Variable or sliding scale royalty systems are those in which the royalty rate in each period is a function of the quantity or value of production in the period. The first empirical evaluation of variable royalty systems was undertaken by Kalter, Tyner, and Hughes in 1975.¹² Their study examined variable royalty systems in which the royalty rate in each period was a linear function of the quantity or value of production in that period. However, other functional forms may be used. Semi-log and reciprocal functions are evaluated in this study as well as a sliding royalty schedule which may approximate any desired functional form. Detailed specifications for all these functions are provided in the analysis section which follows.

Theoretically, variable royalty systems offer both advantages and disadvantages over fixed royalty systems. The major source of uncertainty for private firms in oil and gas leasing is the amount of reserves which

¹² Kalter, Robert J., Tyner, Wallace E., and Hughes, Daniel W. Alternative Energy Leasing Strategies and Schedules for the Outer Continental Shelf. A. E. Research 75-33, Department of Agricultural Economics, Cornell University, Ithaca, New York.

can be produced. Producidble reserves on lease tracts range from zero to millions of barrels of oil or the gas equivalent. Price and cost uncertainty are also important, but not so much as reserve uncertainty. As discussed above, one important reason for royalty (or profit share) systems is to transfer uncertainty from the private to the public sector. While royalty with fixed rates does result in risk transference, much greater risk transference would take place with variable royalty rates. This is true because of the huge economies of scale inherent in oil and gas production. The larger the discovery, the lower the cost per unit to produce the resource, ceteris paribus. Hence, the economic rent to the resource rises more than proportionately as field size increases, at least over a very large range.

By making the royalty rate a function of the quantity or value of annual production, the burden of the royalty payment essentially becomes a function of the profitability of the discovery. Low profit fields pay a low royalty and high profit fields pay a larger royalty. Therefore, the variability in potential profitability is reduced significantly. Also, a larger portion of total government revenue is collected in the form of royalty and less by the cash bonus. This feature means that entry would be facilitated for smaller firms.¹³

Another desirable feature of variable royalty is that the royalty rate diminishes as production declines through time. Hence, the early termination of production problem with higher fixed royalty is reduced considerably.

¹³ Higher fixed royalty also reduces cash bonus payments and could also promote entry.

As was mentioned above, the royalty rate can be made to vary with quantity or value of production. An important distinction between the two is that the quantity determined rate captures uncertainty only in reserves discovered while the value determined rate captures both quantity and price uncertainty. Because of this advantage, only value based systems will be used in this analysis.

One potentially important disadvantage of variable royalty is that it provides an incentive for producers to stretch out production in order to achieve a lower effective royalty rate. Because the royalty rate in each period is a function of the value of production in that period, producers can achieve a lower overall royalty rate by installing less capacity and stretching out the production time horizon. This effect could be much more pronounced with variable royalty than with a fixed royalty. To understand this, we refer again to equation (2) rewritten in time indexed form as equation (3):

$$(3) (1-\lambda_1)R_1-C_1 = \frac{(1-\lambda_2)R_2-C_2}{(1+r)^2} = \frac{(1-\lambda_3)R_3-C_3}{(1+r)^3} = \dots = \frac{(1-\lambda_n)R_n-C_n}{(1+r)^n}$$

The subscripted λ values refer to the calculated royalty rate in each period. A different time stream represented by equation (3) holds for each possible installed capacity. Beginning with low potential installed capacities, as we increase capacity, the λ_t values for any given period increase. As capacity increases, gross revenue (net of royalty) and net revenue are lower in most periods than they would be with no royalty or a low fixed royalty.¹⁴ This means that the optimal installed capacity will

¹⁴ This statement assumes that the variable royalty slope begins at the same point as the low fixed royalty and that for at least some production years, the calculated variable royalty is greater than the minimum royalty.

be lower with variable royalty (because expected net revenue is lower in each period) than for the low fixed royalty case. Figure 3 illustrates this difference. ATNPV max is lower for variable royalty (V'') than for low fixed royalty (V') because more of the government revenue (or economic rent) is being collected through royalties than through the cash bonus. Note also that the variability in ATNPV is less with variable royalty because much of the variation (risk) in revenue is absorbed through changes in royalty payments.

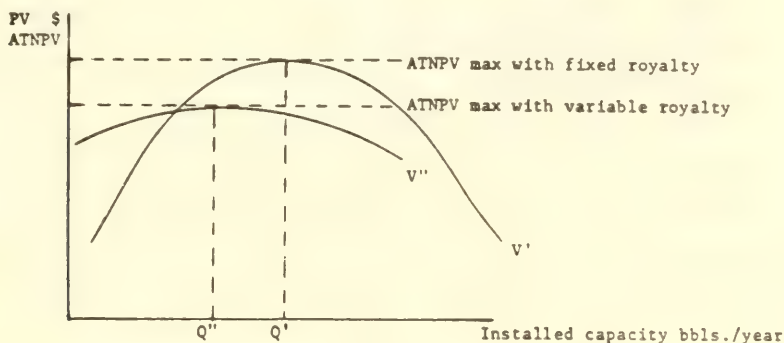


Figure 3. Installed Capacity with Fixed and Variable Royalty.

The major problem, then, with variable royalty is that it provides an incentive for producers to install less capacity and elongate the production period of the lease. Elongation of production results in a reduction in present value of the resource.

One major uncertainty exists regarding analysis of this problem: we don't know the extent to which producers can and will actually vary installed capacity in response to the incentives provided by variable royalty. The model to be used for this analysis (GEN2) assumes that capacity can be and is varied in response to changing economic conditions.

Furthermore, the model assumes that development cost per unit of installed capacity is a function of reserve size (and climatic region) only and not of the amount of installed capacity. Hence, capacity can be reduced at no cost (in terms of cost per unit). In actual operations, geologic, engineering, or management constraints may limit the flexibility in installed capacity size.¹⁵ In addition, it is likely that cost per unit of installed capacity goes up as the amount of capacity installed (on a given reservoir) goes down. To the extent that these conditions reflect production reality, the GEN2 model results would overstate the diminution of installed capacity and extension of production time that would actually occur with variable royalty.

In summary, variable royalty offers the advantages of greater risk sharing and bonus reduction plus alleviating the early termination of production problem. A potential disadvantage is the incentive provided by the variable structure to obtain lower royalty rates by producing less in each period and producing over a longer period of time.

Simulation Results

Before proceeding with the results of simulations on each royalty system, we will review the starting point for this analysis and the data and assumptions used for the simulations. We will then review results for the current cash bonus, higher fixed royalties, linear variable royalty, semi-log variable royalty, and a variable royalty using a step function schedule. Each of these systems will be defined in the respective sections.

¹⁵ Once capacity is installed, these same types of constraints may limit flexibility in varying the production profile. Further research needs to be done on this point.

Initial approach

To begin this analysis, we wanted to obtain some idea of how expected government revenue (bonus and royalty revenue) varied with reserve size. From another viewpoint, we wanted to learn how the price required to bring forth production (with no royalty or bonus) varied with reserve size. By calculating the price-to-produce at each reserve size in the data set and subtracting that value from \$14 (the market price assumed in this analysis), we could get some idea of what fraction of oil revenue might be obtained from bonus and royalty payments at each reserve size. The results of this analysis are shown in Table 1 and Figure 4. Table 1 shows the reserve sizes, minimum price required to produce the reserves, \$14 minus that price (14-P) and the fraction of the \$14 price represented by (14-P). Figure 1 contains a plot of price-to-produce (P) and (14-P) against reserve size.

Price-to-produce ranges from \$36.56 per barrel for an expected reserve size of 10 million barrels to \$2.23 for an expected reserve size of 1 billion barrels. The smallest reserve size having a price-to-produce of less than \$14 is 40 million barrels. Residual value (14-P) ranges from \$.67 per barrel for an expected 40 million barrel reserve to \$11.77 per barrel for an expected reserve of 1 billion barrels. The fraction of residual value ranges from 5 percent to 84 percent.

The main point revealed by the price-to-produce analysis was the confirmation that the relationship between residual value fraction $[(14-P)/P]$ and reserve size is non-linear. In an attempt to better understand the nature of the relationship, we regressed reserve size against residual value fraction using linear, power curve, and semi-log forms. The linear form has the lowest r^2 of .47 and the semi-log had the highest r^2 of .87. The power curve r^2 was .67. These results indicate that

Table 1
Price-to-Produce for a Range of Reserve Sizes

Expected Reserve Size	Price-to- Produce	\$14-P	Fraction of \$14 Required to Produce*
R	P		
(mil.bbl.)	(\$)	(\$)	\$4-P/14 (%)
10	\$36.56	-\$22.56	
20	21.80	-7.80	
30	16.19	-2.19	
40	13.33	.67	05
60	10.13	3.87	28
80	8.44	5.56	40
100	7.33	6.67	48
120	6.56	7.44	53
140	5.98	8.02	57
160	5.47	8.53	61
180	5.13	8.87	63
200	4.85	9.15	65
250	4.27	9.73	70
300	3.89	10.11	72
500	3.02	10.98	78
1000	2.23	11.77	84

*Royalty bid runs were done on alternate reserve sizes as a check on these values. The correlation between the two was very high as we would expect.

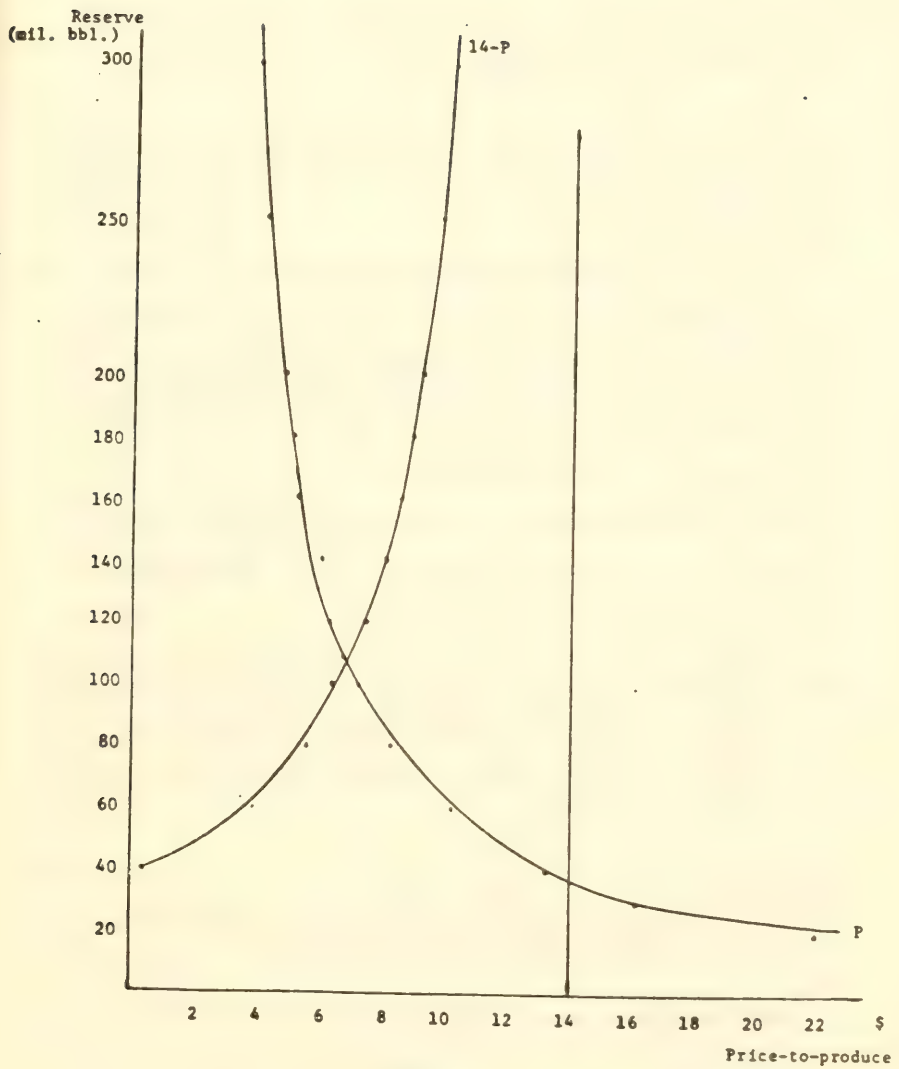


Figure 1

Price-to-Produce for a Range of Reserve Sizes

the residual value fraction is a function of the natural logarithm of reserves as shown in equation (4):

$$(4) F = a + b \cdot \ln R$$

It was this result which led us to include the semi-log function as one of the variable royalty systems.

Assumptions and data

Three important assumptions pertinent to this analysis should be stated at this point. First, the variable capacity version of the GEN2 model was used for all simulations.¹⁶ Second, all simulations beyond the price-to-produce tests were run for the complete set of expected reserve sizes from 30 million to 1 billion barrels. Reserve standard deviations were set equal to one half of the mean. Third, costs for a moderately expensive region (Mid-Atlantic) in 1978 dollars were used for all runs. The power curve cost functions contained in GEN2 were used throughout.¹⁷ The results described below should hold (with appropriate modifications) for other cost regions and reserve ranges. The cost sensitivity analyses using Gulf of Mexico and North Atlantic costs are reported in the Appendix.

The basic data used for the analysis common to all simulations is listed in Table 2. System parameters particular to each system are specified in the appropriate section.

¹⁶ The GEN2 model may be used either with fixed installed capacity or with installed capacity optimized within the model. The optimizing version was used for simulations in this study.

¹⁷ For detailed information on the power curve cost functions, see Chapter V of Kalter, Tyner, and Hughes.

Table 2

Common Input Values for System Simulations

Geologic

Production decline rate, a	.12
Reserve distributions	lognormal
Dry hole risk, mean	.700
Dry hole risk, std. dev.	.103

Price related

Initial oil price, P_0	\$14.00
Initial gas price, GP_0	2.00
Mean of oil price change distribution, $RPIMN$	0.00
Std. dev. of oil price change distribution, $RPISTD$	0.04
Mean of gas price change distribution, $GPIMN$	0.00
Std. dev. of gas price change distribution, $GPISTD$	0.04

Tax related

Depreciation method, $NDEPR$	Sum of years digits
Depreciation lifetime, N	prod. lifetime
Percent investment salvageable, α	.10
Investment tax credit rate, Ω	.10
Federal corporate tax rate, ϕ	.48

Time related

Minimum production time, $TMIN$	9 years
Maximum production time, $TMAX$	40 years
Length of flat production plus production build-up, $FLATP$	4 years
Development and exploration period, LAG	5 years
Exploration period, $LEXLOR$	2 years
Production build-up period, IBP	2 years
Production build-up factors, BPP	
year 1	.5
year 2	.8

Cost related

Working capital factor	
Triangular investment and operating cost contingency distributions*	.10
$CMIN, KMIN$	
$CMUDE, KMUDE$	.25
$CMAX, KMAX$	.30
Rate of change in unit operating cost, $THETA$	.40
Rent per acre, $RENT$	0.00
No. of acres per tract, $ACRES$	\$3.00
	5760.

Table 2. Continued

Investment cost allocation during development, FD	
year 1	0.00
year 2	0.10
year 3	0.30
year 4	0.40
year 5	0.20
Percent investment each year that is tangible, TD	
year 1	0.00
year 2	0.70
year 3	0.70
year 4	0.80
year 5	0.80
Exploration cost allocation during exploration, FX	
year 1	0.40
year 2	0.60
Percent exploration cost each year that is tangible, TX	
year 1	0.50
year 2	0.80
Investment cost control (climatic region), LCLM	
	2
	Mid-Atlantic
Initial operating cost/barrel	0.52
Cost per exploratory well (million \$)	\$5.68
Acquisition cost	\$100,000.00

Other factors

Discount rate	.10
No. of exploratory wells per 1000 acres, WELLS	.50
Bonus factor, BFAC	.75
No. of M.C. iterations, NC00P	100

*These values reflect a 30% adjustment to the cost curves in the model which are in 1975 dollars. Costs are assumed to have increased 30 percent between 1975 and 1978. By subtracting .30 from these factors, one can obtain the actual contingency distributions in 1978 dollars. Hence CMIN and KMIN are -.05, CM0DE and KM0DE are 0.00, and CM0DE and CMAX are 0.10.

System simulations

Having reviewed the general approach to this analysis and provided the common input data and assumptions, we are now prepared to present the results of individual system simulations. The base case, which will be presented first, is the current cash bonus system. Then cash bonus with a higher fixed royalty and royalty bid systems are reviewed. The last group of systems are variable royalty systems which include linear, reciprocal, semi-log, and fixed schedule systems.

Results of each system are presented in this section, and the overall comparison and policy recommendations are provided in the concluding sections. For each system, results are tabulated for fourteen expected reserve sizes ranging from 30 million barrels to 1 billion barrels. The output provided includes after tax net present value (ATNPV), present value of taxes and royalty payments, expected revenues, present value of gross revenue, expected production, installed capacity and production plus development time horizon (given development), percentage of reserve selections developed given that oil is found, peak annual revenue for the mean values case, the smallest developed reservoir, present value of government revenue assuming bonus is equal ATNPV, and present value government revenue assuming bonus is equal .75 times ATNPV. Both mean and standard deviation are provided for each expected reserve size.

Current cash bonus system

The leasing system which is most frequently used is the cash bonus system with a .1667 royalty. Simulation results for this system are presented in Table 3. The smallest reserve size which is developed is 40 million barrels, and ATNPV is just barely positive for this reserve size. ATNPV ranges from \$.04 to \$831.17 million. Royalty ranges from \$8.02 to \$311.81 million, and gross value ranges from \$48.12 to \$1870.49 million. Production and development time horizon ranges from 15 years to 14 years decreasing as reserve size increases. Percentage development ranges from 22 to 100 percent. The smallest developed reservoir ranges from 37 to 43 million barrels. Government revenue with bonus equal to ATNPV ranges from \$15 million to \$1625 million. The government revenue range with bonus = $.75 * \text{ATNPV}$ is \$15 to \$1417 million. All

Table 3
Current Cash Rmia Case

Year	ATMPV P.V.	TAE P.V.	Royalty P.V.	Expected Reserve	Gross Value	Expected Prod.	Installed Capacity	T (incl. if wet dev.)	Peak Revenue (Mean Case)	Smallest Developed Reservoir	P.V. Government Revenue Bonus=ATMPV (mil.\$)	P.V. Government Revenue Bonus=75%ATMPV (mil.\$)
1971	-4.92	-26	3.31	0.89	19.88	3.08	6.30	14.82	22	38.23		
72	7.18	10.15	6.99	5.08	41.92	6.50	1.86	14.71				
73	7.04	7.10	6.07	11.85	48.17	7.66	2.01	14.96	49	81.3	15.16	15.15
74	11.41	14.96	9.85	6.77	59.11	9.31	2.31	14.93				
75	16.07	17.75	16.34	17.77	98.05	15.58	9.37	14.36	77	130.9	40.12	44.64
76	18.96	22.26	13.16	10.16	78.93	12.36	3.41	14.36				
77	19.10	28.30	23.91	23.69	143.42	22.74	11.70	14.70	91	162.6	81.51	76.19
78	26.76	28.78	15.77	13.55	98.58	14.73	6.77	14.50				
79	37.88	38.14	10.85	29.62	183.85	29.13	14.28	14.59	86	210.1	113.61	102.41
80	37.88	38.14	10.85	29.62	183.85	29.13	14.28	14.59				
81	40.85	42.87	37.48	35.58	272.32	35.58	16.78	14.04	100	261.8	146.48	131.27
82	41.44	42.86	37.48	20.72	131.02	20.72	7.38	14.74				
83	76.92	57.71	43.64	41.68	261.81	41.68	19.56	14.02	100	305.4	178.27	159.04
84	49.37	50.69	25.47	23.71	152.81	23.71	8.48	14.14				
85	93.21	67.26	49.89	47.39	299.75	47.39	27.37	14.01	100	349.0	210.36	187.07
86	57.36	58.36	29.11	27.10	178.61	27.10	9.69	14.10				
87	109.69	76.85	56.13	53.31	336.69	53.31	25.17	14.00	100	392.6	242.67	215.23
88	85.41	66.46	32.74	30.49	196.41	30.49	10.89	14.00				
89	176.32	86.47	62.36	59.23	374.10	59.23	27.47	14.00	100	436.3	275.13	243.37
90	176.32	86.47	62.36	59.23	374.10	59.23	27.47	14.00				
91	180.00	120.00	75.95	72.04	451.52	72.04	34.96	14.00	100	545.3	337.07	314.82
92	180.00	120.00	75.95	72.04	451.52	72.04	34.96	14.00				
93	211.04	131.01	91.54	88.85	561.15	88.85	41.95	14.00	100	654.4	439.59	386.83
94	114.38	114.28	54.57	50.81	327.35	50.81	18.15	14.00				
95	385.06	233.24	155.90	148.08	935.26	148.08	69.97	14.00	100	1000.6	774.20	677.84
96	187.39	186.85	90.95	86.68	345.58	86.68	30.74	14.00				
97	633.17	483.60	311.81	296.17	1870.50	296.17	139.86	14.00	100	2181.3	1624.58	1418.79
98	407.96	348.18	181.90	168.17	1081.16	168.17	60.69	14.00				

* For these and larger input reserve sizes, all selected reserve values were developed.

Source: U.S. Army Corps of Engineers, Water Resources Division, Fort Belvoir, St. Louis, Missouri.

economic results are present values. Refer to Table 3 for more detailed results.

The cash bonus case will be used as a reference case, so no evaluation of this system will be undertaken. However, readers are reminded of the limitations of the cash bonus system which were discussed in the theoretical background section.

Higher fixed royalty

This system is similar to the current cash bonus system except that the royalty rate is higher. For this analysis, the royalty rate was set at 40 percent.¹⁸ Results of the analysis are displayed in Table 4. The first noticeable change is that the smallest expected reserve size which has a positive value is 80 million barrels, as compared with 40 million for the current cash bonus case. The first field size with all iterations developed is 200 million barrels. Percentage development is considerably lower than for the cash bonus system for all field sizes up to 200 million barrels. Production and development time for developed cases ranges from 15 to 14 years as with cash bonus.

This result deviates from the theoretically based prediction that higher royalty rates would reduce installed capacity and lengthen production time horizon. Fortunately, there are two good reasons for this departure. First, the model was constrained to a minimum production time horizon of nine years.¹⁹ From previous analysis, we know that the unconstrained

¹⁸ At this level, officials in the Office of Policy Analysis, Department of the Interior, have concluded tentatively that social losses from the higher royalty are acceptable given other tradeoffs which must be made.

¹⁹ Nine years of production plus five years of development yields the fourteen year field life minimum which is common for the cash bonus case.

Table 4
Fixed Royalty Rate of 40 Percent

Year	ATMP P.V.	TAX P.V.	Royalty P.V.	Expected Reserve	Gross Value	Expected Prod.	Installed Capacity	T (incl. if wet dev.)	I Dev. (Mean Case)	Peak Revenue	Smallest Developed Reservoir	P.V. Government Revenue Bonus-ATMP	P.V. Government Revenue Bonus-75ATMP
(1)	(mil.\$)	(mil.\$)	(mil.\$)	(mil.bbl.)	(mil.\$)	(mil.bbl.)	(mil.bbl.)	(years)		(mil.\$)	(mil.bbl.)	(mil.\$)	(mil.\$)
56	2.76	2.99	1.14	8.89	2.85	4.5	9.67	15.50	2	49.11	68.75	-	-
57	3.41	3.64	1.35	5.08	21.73	3.30	9.6	15.08	11	67.52	59.49	-	-
58	4.83	5.06	5.98	11.85	18.96	2.27	2.47	15.08	11	67.52	59.49	-	-
59	4.86	5.07	18.78	6.77	46.96	7.18	2.47	15.08	11	67.52	59.49	-	-
60	2.04	4.78	22.47	17.77	56.17	8.87	11.17	15.29	36	114.98	66.89	-	-
61	10.73	15.04	35.34	10.16	86.15	13.68	3.67	1.15	36	167.60	66.57	64.25	62.66
62	6.36	13.11	44.78	23.69	111.95	17.78	13.74	14.74	61	210.13	65.20	102.02	97.98
63	16.19	20.73	65.75	13.55	114.37	17.85	4.61	14.86	77	210.13	65.20	102.02	97.98
64	21.34	25.47	52.57	16.94	167.76	25.86	15.46	14.56	86	261.76	68.00	137.78	131.18
65	28.39	27.97	83.47	15.34	206.55	33.10	5.75	17.72	86	261.76	68.00	137.78	131.18
66	28.31	30.17	105.16	15.11	145.48	27.98	17.08	14.63	86	261.76	68.00	137.78	131.18
67	31.80	32.05	168.27	43.62	250.28	39.39	20.63	16.24	91	305.39	172.06	162.86	162.86
68	41.45	42.14	117.55	23.71	165.55	25.77	8.78	16.24	91	305.39	172.06	162.86	162.86
69	36.97	39.62	72.49	291.69	46.60	27.79	27.79	14.17	96	348.01	62.01	207.34	195.43
70	34.31	38.62	117.49	27.10	181.24	28.14	9.64	14.17	96	348.01	62.01	207.34	195.43
71	42.34	44.69	66.14	53.31	333.49	57.86	25.36	14.17	98	392.44	71.18	240.86	226.23
72	69.60	55.93	149.51	30.69	200.36	31.08	10.97	14.17	98	392.44	71.18	240.86	226.23
73	47.65	48.60	87.41	58.23	373.77	58.23	37.87	14.08	100	436.77	73.17	275.04	257.64
74	97.49	72.49	187.01	33.80	218.52	33.87	12.18	14.08	100	436.77	73.17	275.04	257.64
75	61.49	63.79	109.15	74.04	487.52	74.04	34.94	14.02	100	436.77	73.17	275.04	257.64
76	126.96	77.07	270.48	42.34	377.86	42.34	17.55	14.02	100	436.77	73.17	275.04	257.64
77	175.48	77.07	139.86	50.81	527.40	80.85	4.94	14.01	100	436.77	73.17	275.04	257.64
78	175.48	156.87	336.10	168.09	935.24	168.09	18.16	14.01	100	436.77	73.17	275.04	257.64
79	175.48	132.78	218.23	84.69	545.58	84.69	30.74	14.00	100	1000.67	734.71	734.71	713.40
80	175.48	132.78	218.23	296.17	1470.45	296.17	139.86	14.00	100	2181.33	1628.57	1628.57	1487.69
81	277.80	277.85	436.46	168.37	1081.16	168.37	60.59	0.00					

* For those and larger input reserve sizes, all selected reserve values were developed.

† For each reserve size, the first row is mean value and the second row is standard deviation.

model would produce fields in as little as four to seven years. However, geologic and engineering constraints prevent this from happening in actual production practice, so the minimum time constraint was imposed. Since, the economics of the model drive the solution towards producing as soon as possible (in the cash bonus case), a fourteen year production and development time is common.

Because the cash bonus case production time is higher with the constraint than pure economics would dictate, it is moved closer to the solution time with a higher royalty. Suppose the pure economic production time for a cash bonus case is five years. Further suppose that the pure economic production time for the higher royalty case is eight years. Both will solve in the constrained model at nine years and the prolongation effect of higher royalty will not be evidenced. What this says is that the geologic and engineering production constraints almost entirely mute the effect of production time elongation induced by a higher royalty. In the real world then, higher royalty would not be expected to significantly extend production times.

A second reason the theoretically predicted extension does not occur is because of the bonus and exploration cost tax write-off impact on development decisions. The prolongation impact would be expected to be strongest on marginal fields. However, with the tax write-off from bonus and exploration costs, many marginal fields are not developed because the tax write-off has greater present value than developing the reservoir. Hence, the production time extension that would have occurred had these fields been developed does not enter into the averages.²⁰ For these two reasons, production time horizon does not get extended in practice

²⁰ The installed capacity and time horizon figures are "given development."

with a higher royalty as predicted by the pure economic theory.

Royalty bid system

Under this system, the royalty rate is the bid variable. For modeling purposes, it was assumed that the royalty bid rate is that royalty which drives ATNPV to zero. In other words, it is the rate which converts all of the expected residual value (except taxes) into royalty payments. Mechanically, the GEN2 model uses a search technique to find that royalty rate which makes ATNPV fall between zero and an input zero calibration factor. The factor used for this analysis was \$.5 million. The royalty bid system was run for seven alternative reserve sizes from 40 to 1000 million.²¹

Results of the simulations are displayed in Table 5. Royalty bid rates ranged from 17 to 86 percent. It is important to note that the bid formation process used here assumes no speculation--firms bid that royalty rate which corresponds to their expected reserve distribution. Production and development time ranged from 15.3 to 14.7 years. Notice that some production delay did occur with these higher royalty rates. Percentage development ranged from 51 percent for a 40 million barrel field to 29 percent for a 1 billion barrel field. The smallest developed reservoir increased dramatically with increasing expected reserve size. Generally the smallest developed reserve tended to be roughly equal to the input reserve size. For example, if 200 million barrels were the expected reserve size, the minimum discovered field size that would be

²¹ Fewer runs were done because the royalty bid system is quite expensive to simulate.

developed is 207 million barrels under this system.²² All fields smaller than 207 million barrels would not be developed. This result means that significant amounts of oil are not developed. For example, expected production on the 300 million barrel field with royalty bidding is 44 million barrels as compared with 89 million barrels for the current cash bonus system.²³ We would expect to lose half the oil with the royalty bid system as compared to the cash bonus system. Furthermore, oil value and government revenue fall drastically in the royalty bid system. For the 300 million barrel expected reserve size, government revenue is \$231 million for royalty bid and \$440 million for the current cash bonus case, a 48 percent reduction.²⁴

Clearly, use of the royalty bidding system results in major social losses. Moreover, if speculative bidding occurs, these losses would be even higher. It is very doubtful that increases in competition or other advantages could offset the major social losses caused by the royalty bidding system.

Variable royalty systems

Variable royalty systems are those in which the royalty rate in each period is determined by the value or quantity of production in that period. Only systems using value as the determining factor will be

²² The smallest developed field is slightly larger than the mean of the expected reserves distribution because the lognormal distribution is used. A few large highly profitable fields in the right tail of the distribution drive the royalty bid rate up to the point that the mean field size is just sub-economic.

²³ The chance of no resource being found is .7, which accounts for the difference between 300 and 88 = 90.

²⁴ This calculation assumes government revenue is calculated with bonus = ATNPV. If bonus = .75 * ATNPV, government revenue falls from \$387 to \$231 million, a 40 percent reduction.

Table 5
Royalty Bid System

Input Reserve	Royalty Bid	Tax	Royalty	Reserve	Value	Prod	Q_0	T	% Dev.	Smallest Inv. Rev.	Gov. Rev.
40	.1773	7.76 15.37	8.76 10.40	11.45 6.77	50.83 60.40	7.87 9.26	7.00 2.73	14.71 .81	51	36.58	16.52
80	.4781	8.12 17.86	42.67 56.03	23.69 13.55	88.26 121.37	13.87 18.69	14.32 4.58	15.09 1.00	63	78.89	30.79
120	.5941	9.10 19.79	77.93 107.99	35.54 20.32	131.36 181.76	20.37 27.98	21.42 7.01	15.21 1.12	47	119.77	87.03
160	.6609	9.35 20.81	111.21 156.70	47.39 27.10	168.26 241.63	26.15 37.25	26.67 9.36	15.30 .90	40	163.50	120.56
200	.7031	9.70 21.83	144.65 211.71	58.23 33.87	205.72 301.10	31.92 46.39	35.80 11.78	15.33 .96	39	206.77	154.35
300	.7594	10.75 24.86	230.01 341.85	88.85 50.81	289.72 469.65	44.36 68.52	54.35 18.31	15.22 1.02	36	328.89	230.76
1000	.8431	13.80 35.18	303.37 1264.76	296.17 160.37	814.44 1466.87	170.51 216.79	189.07 63.73	14.66 .77	29	1210.08	717.27

evaluated in this study. Four different types of variable royalty systems will be examined: (1) linear, (2) reciprocal, (3) semi-log, and (4) fixed (step function) schedule. The calculation formulae, rate of change in the royalty rate with respect to a change in value, and rate of change in royalty payments with respect to a change in value are given in Table 6.

The linear system makes the royalty rate in any period (R_t) a function of the minimum royalty rate (R_0), value of production in that period (V_t), the value of production up to which the minimum royalty applies (V_0), and the slope of the linear equation (b). The rate of change of the royalty rate with respect to a change in production value is b , the slope of the linear equation. This slope is constant regardless of the level of production value. The rate of change in royalty payments with respect to a change in value is $R_0 + 2bV_t - V_0$. For the reciprocal function, the royalty rate varies between the minimum and maximum rates with the reciprocal of production value as shown in Table 6. The derivative of the reciprocal function is a more complex function and makes the rate of change in royalty rate with respect to a change in production value an inverse function of the square of production value. In other words, the rate of change of the royalty rate decreases as the square of production value increases. The rate of change of royalty payments for the reciprocal function is simply R_x . The derivative of the semi-log function is b/v . This rate of change in the royalty rate is also an inverse function of the value of production -- as value increases, the rate of change in the royalty rate decreases in inverse proportion. The rate of change in royalty payments for the semi-log is a function of b and the natural log of the scaled adjusted production value. The fixed variable royalty schedule is a step function

Characteristic	Linear	Reciprocal	Semi-Log	Fixed Schedule
1. Formula	$R_t = R_0 + b \cdot (V_t - V_0)$ subj. to: if $V_t < V_0$, $R_t = R_0$ if $R_t > R_x$, $R_t = R_x$	$R_t = R_x - \frac{V \cdot (R - R_0)}{V_t}$ subj. to: if $V_t > V_0$, $R_t = R_0$	$R_t = b \cdot \ln((V_t - V_0)/S)$ subj. to: if $R_t > R_x$, $R_t = R_x$ if $R_t < R_0$, $R_t = R_0$	step function
2. Rate of change of the royalty rate with respect to a change in value	$dR_t/dV_t = b$	$dR_t/dV_t = \frac{V \cdot (R - R_0)}{V_t^2}$	$dR_t/dV_t = b/V_t$	$\Delta R_t/\Delta V_t = \frac{R_1 - R_0}{V_1 - V_0}$
3. Rate of change in royalty payments ($R_t V_t$) with respect to a change in value	$d(R_t V_t)/dV_t = R_0 + 2bV_t - V_0$	$d(R_t V_t)/dV_t = R_x$	$d(R_t V_t)/dV_t = \frac{b}{1 + \ln((V_t - V_0)/S)}$	$\Delta(R_t V_t)/\Delta V_t = \frac{V_1 R_1 - V_0 R_0}{V_1 - V_0}$

definitions:

V_0 = value of production at which the variable rate structure takes effect; at any value of production below V_0 , the minimum royalty rate is used.

V_t = value of production in year t .

R_0 = minimum royalty rate.

R_x = maximum royalty rate.

R_t = royalty rate in period t .

b = coefficient of the linear and semi-log forms (the slope of the linear function).

S = scale factor.

with the royalty rate increasing in discrete steps as value of production increases. For example, the royalty rate might be 12.5 percent for annual production values up to \$50 million and increase to 15 percent at that point. The rate could remain at 15 percent for annual production values up to \$90 million and increase to 20 percent at that point. The schedule would continue to rise in like manner up to the maximum royalty rate. The schedule used for this analysis has a maximum of 13 steps, but 11 additional steps could be easily added as mid-points of the existing steps. Any number of steps could be used if the step schedule is designed to approximate some functional form such as semi-log.

The fixed step functions schedule has two major advantages. First, it is the most flexible of the systems. It can be designed to approximate a linear, reciprocal, or semi-log schedule or any other type of schedule. In fact, it can combine advantages of several functional schedules. Another advantage of the system is its simplicity. To determine the royalty rate in any period, one simply scans the table to determine the applicable rate. No calculation is required. One potential disadvantage is that companies may try to reduce production at year end if they could reduce the rate by such a reduction. However, with a large number of steps and quarterly royalty calculation this potential problem is not likely to be serious.

To get an idea how the systems compare, Table 7 contains the royalty rate which would be imposed for a sample schedule of each of the four systems evaluated. Revenue values were obtained from the peak revenue values of the current cash bonus case (Table 3). The linear schedule is the one which was used in OCS sales 43 and 45. The minimum and maximum

royalty rates are 16.67 and 50 percent. The minimum rate applies for production value up to \$6 million, and the slope is .0025 per million dollars. The reciprocal schedule ranges from 12.5 to 50 percent and begins at a value of \$60 million. The semi-log schedule ranges from 12.5 to 70 percent with a b value of .09. The fixed step function schedule ranges from 12.5 to 70 percent and is designed to approximate the semi-log schedule. Details of the parameters for all the systems are provided in Table 7.

The linear schedule accelerates (in terms of royalty rate) faster than any of the other systems. In fact, the maximum rate is reached at a reserve size of 100 million barrels. This occurs largely because this set of system parameters is "tuned" to the much lower reserve expectations for sales 43 and 45. One of the characteristics of the linear system is that it must be "tuned" to the range of reserve expectations for each sale or group of tracts.

The reciprocal schedule accelerates fairly rapidly at first and much slower as reserve size continues to increase. The semi-log schedule accelerates more slowly at first and then at a faster rate than the reciprocal. The fixed step function schedule behaves much as the semi-log schedule because it was designed to approximate the semi-log. Neither the semi-log nor the fixed schedule reach their maximum rate of 70 percent within this range of reserve sizes.

We have now described the four systems which are being used in this analysis. Detailed results of model simulations are provided below.

Linear variable royalty. Results of the linear variable system are presented in Table 8. Linear variable royalty system results are similar

Table 7

Comparison of Variable Royalty Schedules

Expected Reserve Size (Million bbl.)	Peak Revenue Mean Case (Million \$)	Linear ¹ (%)	Reciprocal ² (%)	Semi-Log ³ (%)	Fixed Step Function ⁴ (%)
30	57.5	29.5	12.5	15.7	15.0
40	81.3	35.5	22.3	18.9	15.0
60	130.9	47.9	32.8	23.1	20.0
80	162.6	50.0	36.2	25.1	25.0
100	218.1	50.0	40.0	27.7	25.0
120	261.8	50.0	41.4	29.4	25.0
140	305.4	50.0	42.6	30.8	30.0
160	349.0	50.0	43.6	32.0	30.0
180	392.6	50.0	44.3	33.0	30.0
200	436.3	50.0	44.8	34.0	30.0
250	545.3	50.0	45.9	36.0	35.0
300	654.4	50.0	46.6	37.6	35.0
500	1090.6	50.0	47.9	42.2	40.0
1000	2181.3	50.0	49.0	48.5	45.0

¹ $V_o = \$6$ million, $R_o = .1667$, $R_{max} = .50$, $b = .0025$ per million dollars.

² $V_o = \$60$ million, $R_o = .125$, $R_{max} = .50$.

³ $V_o = 0.0$, $b = .09$, $S = \$10$ million, $R_{max} = .70$.

⁴ $R_o = .125$, $R_{max} = .70$, the remainder of the schedule is as follows:

Royalty Rate	Value
.15	50
.20	90
.25	160
.30	280
.35	490
.40	850
.45	1480
.50	2590
.55	4500
.60	7860
.65	13700
.70	23800

Table 8
Linear Variable Royalty System

Rate	ATMPY	YAL	Royalty	Expected	Gross	Expected	Installed	T	Peak	Smallest	P.V.	P.V.
per	P.V.	P.V.	P.V.	Prod.	Value	Prod.	Capacity	(Incl. if wet	Revenue	Developed	Government	Government
100	(mil.\$)	(mil.\$)	(mil.\$)	(mil.bbl.)	(mil.\$)	(mil.bbl.)	(mil.bbl.)	dev.)	(Mean	(mil.bbl.)	Bonus-ATMPY	Bonus-75ATMPY
-10	(mil.\$)	(mil.\$)	(mil.\$)	(mil.bbl.)	(mil.\$)	(mil.bbl.)	(mil.bbl.)	(years)	(mil.\$)	(mil.bbl.)	(mil.\$)	(mil.\$)
70	-7.35	-3.19	7.29	0.89	6.70	1.18	5.69	31.00	7	67.83	51.06	-
75	2.74	5.00	9.41	5.08	26.69	4.76	1.43	1.74	19	63.78	52.07	-
80	-5.99	-7.75	7.22	11.95	20.08	3.57	0.33	2.21	19	63.78	52.07	-
85	4.74	8.37	17.59	6.77	66.25	6.77	0.81	1.55	51	93.50	54.87	-
90	-1.41	6.63	15.02	17.77	66.25	11.82	2.05	22.63	51	93.50	54.87	-
95	8.90	13.05	33.21	13.16	77.05	13.91	2.07	1.92	74	170.13	55.02	62.98
100	10.72	15.47	47.19	23.69	110.00	20.70	9.64	22.16	74	170.13	55.02	62.98
105	9.78	18.86	69.72	29.62	155.90	16.80	4.68	3.02	87	135.87	53.47	95.42
110	13.99	17.90	60.70	16.94	118.55	19.11	6.49	3.60	93	196.45	56.40	178.51
115	18.01	21.33	72.41	20.32	160.24	21.71	14.57	19.84	93	196.45	56.40	178.51
120	22.69	29.28	115.28	41.46	242.18	41.09	18.16	1.94	98	236.37	55.36	161.58
125	22.21	28.91	82.49	23.21	159.71	42.17	17.08	1.94	98	236.37	55.36	161.58
130	30.16	38.00	137.45	27.19	182.07	27.39	20.44	17.21	99	349.01	58.50	194.78
135	31.98	38.00	137.45	27.19	182.07	27.39	20.44	17.21	99	349.01	58.50	194.78
140	44.16	43.80	179.81	59.23	275.85	53.31	23.57	16.88	100	392.64	65.81 ^a	227.03
145	35.91	36.26	114.34	33.87	228.16	33.87	17.25	3.95	100	392.64	65.81 ^a	227.03
150	47.42	56.52	210.26	74.04	462.75	74.04	26.57	16.16	100	436.26	-	258.23
155	47.39	49.49	139.54	47.34	276.93	47.34	13.45	3.65	100	436.26	-	258.23
160	89.57	69.68	278.86	86.85	558.61	86.85	16.06	7.55	100	545.33	-	312.32
165	58.81	61.03	165.32	50.81	329.74	50.81	14.00	15.10	100	545.33	-	312.32
170	187.44	174.13	467.62	148.09	845.48	148.09	60.92	16.48	100	684.40	-	415.72
175	104.43	106.20	212.79	84.49	544.58	84.49	30.26	0.00	100	1080.67	-	778.60 ^a
180	125.97	161.17	411.66	294.11	1870.49	294.11	130.86	14.00	100	2181.33	-	1518.00
185	277.07	270.71	545.58	169.37	1081.16	169.37	61.49	0.00	100	2181.33	-	1518.00

^a For these and larger input reserve sizes, all selected reserve values were developed.

^b For each reserve size the first row is mean value and the second row is standard deviation.

to the 40 percent fixed royalty in some respects. The minimum expected reserve which has positive value is 80 million barrels. All discovered reserves are not developed until the expected reserve size of 180 million barrels. The major difference between this system and ones discussed earlier is the greater production time horizon. For developed cases, production and development time horizon ranges from 22 to 14 years.²⁵ Production time horizon is lengthened considerably for the lower reserve sizes and very little for large expected reserves. When production is spread out, the present value of economic variables is reduced. Hence, gross value and government revenue will be lower than the cash bonus case for lower expected sizes.

Reciprocal system. Results of the reciprocal system are presented in Table 9. For smaller reserve sizes, the reciprocal system yields prolongation of production time similar to the linear system. As field size increases, it also tends to behave like the linear variable royalty and higher fixed systems with little time extension and significant ATNPV reduction.

Semi-log systems. Results of two semi-log systems are presented in Tables 10 and 11. Table 10 uses a semi-log function which is "tuned" to the price-to-produce curve shown in Figure 3. V_0 was set at \$32 million and b at .15. The smallest positive value expected reserve size was 60

²⁵ Greater prolongation of production time is evidenced here than was expected for this same system when used in sales 43 and 45. The reason prolongation was lower for the data used in the analysis of sales 43 and 45 is that both costs and expected reserve sizes were lower. If we attempted to fine tune the linear system parameters to data used in this analysis, less prolongation could be achieved.

Table 9
Reciprocal Variable Royalty Rate

V.	ATPV	TAX	Royalty	Expected	Gross	Expected	Installed	T	Peak	Smallest	P.V.	P.V.
		P.V.	P.V.	Reserve	Value	Prd.	Capacity	(Incl. if wet	Revenue	Developed	Government	Government
								dev.)	(Mean	Reservoir	Bonus-ATPV	Bonus-ATPV
	(mil.\$)	(mil.\$)	(mil.\$)	(mil.bbl.)	(mil.\$)	(mil.bbl.)	(mil.bbl.)	(years)	Case)	(mil.bbl.)	(mil.\$)	(mil.\$)
30	-90	6.09	8.62	11.85	44.46	7.68	5.56	19.41	69.97	36.58		
40	8.43	12.53	12.78	6.77	52.24	9.27	1.53	.90				
60	8.20	41.71	21.58	17.77	89.66	16.15	7.04	19.77	96.22	35.61	44.49	42.44
80	11.21	15.14	22.39	10.16	67.20	11.90	2.61	1.06				
100	16.02	21.00	36.35	23.69	121.18	22.86	8.95	19.87	92	130.96	73.37	69.37
120	14.08	17.66	34.38	13.55	85.20	14.59	4.05	1.37				
140	23.63	27.03	53.24	29.62	165.71	29.46	12.05	19.63	99	183.70	103.90	97.99
160	17.08	20.04	46.85	16.94	104.08	17.12	5.65	1.56				
180	30.97	32.19	60.40	35.16	200.89	35.54	13.50	16.85	100	186.45	134.66	126.92
200	30.97	32.19	60.40	35.16	200.89	35.54	13.50	16.85	100	186.45	134.66	126.92
250	30.97	32.19	60.40	35.16	200.89	35.54	13.50	16.85	100	186.45	134.66	126.92
300	105.40	78.42	251.42	86.65	554.22	86.85	40.74	15.02	100	634.40	435.44	409.04
500	198.29	132.64	447.85	148.09	934.53	148.09	69.78	14.08	100	1090.67	773.78	724.21
1000	106.69	108.55	268.43	84.69	546.25	84.69	30.44	.44				
	441.78	271.85	910.95	296.17	1870.49	296.17	136.84	14.00	100	2181.33	1624.58	1514.14
	224.24	223.16	540.71	169.37	1091.16	169.37	60.49	0.00				

T: these and larger input reserve sizes, all selected reserve values were developed.

For each reserve size, the first row is mean values and the second row is standard deviations.

Table 10
Seal-log Sliding Scale Royalty - High Slope

Input Reserve C-11, (mil.)	ATPP P.V. (mil.\$)	YAS P.V. (mil.\$)	Royalty P.V. (mil.\$)	Expected Reserve (mil.bbl.)	Gross Value P.V. (mil.\$)	Expected Prod. (mil.bbl.)	Installed Capacity (mil.bbl.)	T (Incl. if wet dev.) (years)	Peak Revenue (Cen) (mil.\$)	Smallest Developed Reservoir (mil.bbl.)	P.V. Government Revenue Bonus-ATPP (mil.\$)	P.V. Government Revenue Bonus-YAS/ATPP (mil.\$)
70	-5.00	-57	3.79	8.89	20.80	3.61	4.79	19.56	77	36.85	-	-
80	-1.30	9.22	7.07	5.08	38.19	6.71	1.18	19.78	51	36.58	-	-
90	8.05	12.18	12.73	11.85	44.15	7.08	5.50	19.78	51	36.58	-	-
100	7.02	13.40	21.63	17.77	85.95	15.68	1.51	20.97	78	95.68	42.25	40.50
110	10.68	14.97	22.53	10.16	87.25	22.86	2.31	21.04	97	127.55	71.07	67.67
120	16.41	20.05	36.61	23.89	125.44	32.86	8.57	20.82	97	127.55	71.07	67.67
130	12.41	16.79	31.76	29.62	136.97	29.48	3.27	1.14	99	159.46	99.01	93.78
140	18.81	23.38	44.01	16.96	92.86	17.12	4.26	1.17	100	187.00	125.62	118.86
150	26.44	28.48	68.48	35.54	180.65	35.54	12.08	21.50	100	218.17	152.18	144.10
160	31.99	33.18	87.01	61.46	221.71	61.46	14.02	21.78	100	249.36	178.25	169.99
170	37.67	21.82	68.39	21.71	128.44	21.71	16.07	21.86	100	280.50	206.26	195.81
180	19.37	23.59	81.33	47.39	253.22	47.39	6.83	21.96	100	311.67	233.21	221.67
190	41.81	39.89	124.56	71.10	286.44	71.10	7.64	22.13	100	342.84	261.06	248.86
200	20.98	23.45	131.86	59.23	315.45	59.23	19.91	22.30	100	373.99	288.25	272.66
210	46.32	22.17	107.27	33.87	182.90	33.87	8.51	22.46	100	405.14	316.66	298.66
220	56.90	50.09	194.07	74.04	393.07	74.04	26.78	22.60	100	436.29	345.86	329.86
230	64.38	58.45	244.42	62.34	226.68	62.34	10.64	22.76	100	467.51	375.06	359.06
240	28.53	38.44	171.72	88.85	470.51	88.85	29.63	22.91	100	498.73	404.26	388.26
250	96.17	78.66	463.83	148.09	771.16	148.09	48.76	23.06	100	529.95	433.46	417.46
260	38.07	48.18	309.53	84.89	445.66	84.89	19.62	23.21	100	561.17	462.66	446.66
270	138.22	108.65	1097.74	264.11	1550.98	264.11	98.64	23.36	100	592.39	491.86	475.86
280	49.47	60.38	405.38	119.17	607.76	119.17	56.67	23.50	100	623.61	521.06	504.06

* For these and larger input reserve sizes, all selected reserve values were developed.

NOTE: For each reserve size, the first row is mean values and the second row is standard deviations.

Table 11
Seed-ling Royalty, Slope = .09

Age	ATW	TAE	Royalty	Expected	Gross	Expected	Installed	T	Peak	Smallest	P.V.	P.V.
(yr.)	(mil.\$)	(mil.\$)	P.V.	Reserve	Value	Prod.	Capacity	(incl. if wet	(Mean	Developed	Revenue	Government
(mil.\$)	(mil.\$)	(mil.\$)	(mil.\$)	(mil.\$)	(mil.\$)	(mil.\$)	(mil.\$)	(year)	Case)	(mil.\$)	(mil.\$)	Bonus-ATW
(mil.\$)	(mil.\$)	(mil.\$)	(mil.\$)	(mil.\$)	(mil.\$)	(mil.\$)	(mil.\$)	(year)	(mil.\$)	(mil.\$)	(mil.\$)	(mil.\$)
70	-4.96	3.31	3.31	8.89	20.01	3.28	5.40	17.17	74	32.48	37.95	-
80	-4.24	9.48	7.31	5.08	40.05	6.57	1.57	17.27	31	72.96	36.58	-
90	9.39	13.67	11.51	6.77	55.67	7.88	1.98	94	80	109.45	36.97	47.33
100	10.99	16.15	20.19	17.77	94.85	15.94	8.11	16.67	100	153.31	39.66	76.96
110	22.21	24.23	32.52	23.69	136.88	22.74	10.45	16.23	91	191.66	41.04	111.38
120	31.39	31.64	45.95	29.62	177.67	29.74	12.94	15.80	97	281.89	43.87	143.49
130	44.42	26.91	36.38	16.94	110.97	17.43	6.00	1.08	100	384.54	175.37	181.50
140	53.29	45.67	74.36	41.66	255.54	41.46	18.18	15.23	100	375.19	207.55	220.76
150	64.06	52.17	89.34	47.39	291.56	47.19	21.76	14.97	100	365.86	239.93	250.78
160	76.70	58.59	104.64	53.11	331.35	53.11	24.31	14.83	100	436.27	334.80	376.45
170	87.29	64.90	120.41	58.23	368.75	59.23	27.09	14.71	100	458.40	407.33	473.48
180	113.42	80.37	141.06	74.04	463.76	74.04	31.16	14.44	100	1000.67	772.67	1657.42
190	139.03	91.81	170.51	88.64	552.08	88.64	34.71	14.37	100	130.51	1404.22	1507.83
200	165.67	122.51	180.68	100.81	726.32	50.81	38.06	14.10	100	130.51	1404.22	1507.83
210	216.99	151.89	197.79	148.09	933.10	148.09	29.35	14.04	100	130.51	1404.22	1507.83
220	277.16	177.98	208.74	184.69	1167.91	296.17	30.73	14.04	100	130.51	1404.22	1507.83
230	359.16	227.98	208.74	296.17	1407.91	296.17	30.73	14.04	100	130.51	1404.22	1507.83
240	459.16	277.98	208.74	296.17	1407.91	296.17	30.73	14.04	100	130.51	1404.22	1507.83

* For these and larger input reserve sizes, all selected reserve values were developed.

NOTE: For each reserve size, the first row is mean value and the second row is standard deviation.

million barrels. However, the 40 million reserve size was only slightly negative. Production plus development time horizons ranged from 20 to 25 years with times increasing with larger expected reserve sizes. This system provides a rather large incentive to postpone production which increases with reserve size. Notice, however, the very large reductions in ATNPV (and consequently bonus) achieved by this system as compared with the current cash bonus system.

The second semi-log system is the one described in Table 7. It has V_0 of 0.0 and a b value of .09. Production and development time for this system range from 16.7 to 14.0 years for developed cases. The minimum expected reserve size with a positive value is 60 million barrels, but the 40 million expected reserve has a very small negative value. The semi-log system with these parameter values caused very little production time extension yet did achieve significant reductions in ATNPV. For the 300 million barrel expected reserve, an ATNPV reduction of 34 percent was achieved with an average time extension of .3 years. The largest production time extension was 2.3 years which is a 26 percent extension.²⁶ Yet even for this case a greater percentage of the reserve discoveries were developed (80 versus 77 for current cash bonus) and government revenue was virtually the same as the current cash bonus case. For the expected 300 million barrel reserve, government revenue with unadjusted bonus is about the same as current cash bonus, but government revenue with bonus adjusted for risk is 4 percent higher using the semi-log variable royalty system.

²⁶ If there are costs associated with production prolongation, the actual prolongation could be considerably less. The Appendix contains a set of simulation results with installed capacity and production time horizon held constant. With these results we will have presented two extreme cases: (1) The assumption used in the main text which allows any degree of production prolongation at no cost (per unit of installed capacity); and (2) The Appendix case in which no production prolongation is permitted at any cost. The real world likely lies in between these extremes.

Fixed step function schedule. Two schedules are presented for the fixed schedule variable royalty in Tables 12 and 13. The first schedule in Table 12 was scaled to the price to produce results as was done for the first semi-log function. Production and development time horizons ranged from 26 to 17 years for positive value cases. Basically, the results of this test are similar to the first semi-log case: significant reductions in ATNPV were achieved, but significant production time extension also occurred.

The second fixed schedule results are displayed in Table 13. This schedule is the same as the one defined in Table 7. Production and development time horizon ranged from 16 to 15 years and significant ATNPV reduction occurred. The smallest positive value expected reserve size was 40 million barrels, the same as for the current cash bonus case. Percentage development was higher for the fixed schedule system than for the current cash bonus in all cases with less than 100 percent developed.

Summary and Conclusions

In reviewing the analysis and tables of output, three very important conclusions emerge:

1. The installed capacity optimization algorithm and assumptions used in this analysis are critical to the results. If installed capacity optimization is constrained by geology, engineering, or management considerations, or if capacity reductions cannot be done at zero cost, the answers could be very different. In particular, the semi-log and fixed schedule variable royalty systems with steep slopes would look much better than indicated here. The Appendix provides one set of results in which production time is fixed for all systems. These results verify the importance of understanding constraints on installed capacity optimization.

Table 13
Fixed Schedule Variable Royalty Tuned to Semi-Log Function

Rate	ADSV	TAR	Royalty	Expected	Gross	Expected	Installed	T	Peak	Smallest	P.V.	P.V.
Size	(mil.)	(mil.)	P.V.	Reserve	Value	Prod.	Capacity	(incl. if wet	Revenue	Developed	Government	Government
(mil.)	(mil.)	(mil.)	(mil.)	(mil.)	(mil.)	(mil.)	(mil.)	dev.)	(mil.)	(mil.)	Revenue	Revenue
(mil.)	(mil.)	(mil.)	(mil.)	(mil.)	(mil.)	(mil.)	(mil.)	(years)	(mil.)	(mil.)	(mil.)	(mil.)
30	-4.42	1.16	3.34	0.89	22.90	3.73	5.43	16.64	78	36.30		
	7.06	10.30	6.80	5.08	41.52	6.79	1.34	1.22				
40	-2.76	7.01	7.90	11.45	47.57	7.88	6.34	16.33	51	36.58	15.17	15.11
	10.44	14.20	10.32	6.77	55.48	8.77	1.79	1.49				
60	12.64	18.03	17.79	17.77	95.28	15.94	8.22	16.41	80	109.44	47.36	47.23
	15.85	19.34	16.86	10.16	73.96	12.08	3.15	1.33				
90	24.82	25.52	29.20	21.49	136.50	22.86	10.50	15.92	92	153.31	79.56	73.35
	20.80	23.80	26.81	13.55	91.52	16.59	4.60	1.61				
100	34.35	31.82	40.05	29.62	176.81	29.37	12.64	16.04	98	191.64	110.22	101.13
	25.73	28.20	31.70	16.94	107.68	17.27	5.71	1.68				
120	44.27	40.89	51.87	35.34	214.33	35.54	15.07	15.87	100	261.76	141.13	129.06
	30.40	32.75	38.54	20.32	124.94	20.32	6.58	1.34				
140	60.02	48.00	65.50	41.46	253.00	41.46	18.02	15.55	100	284.54	173.52	158.52
	35.81	34.20	50.01	23.71	130.27	23.71	8.28	1.53				
160	71.03	55.13	77.81	67.39	369.76	67.39	20.48	15.52	100	348.01	203.97	186.21
	40.76	41.73	51.54	27.18	169.76	27.18	10.18	1.74				
180	87.06	61.97	91.36	53.31	326.98	53.31	23.21	15.42	100	365.86	235.39	214.87
	45.66	48.13	67.63	30.49	191.02	30.49	10.34	1.48				
200	93.49	68.20	106.71	59.23	360.70	59.23	25.68	15.50	100	435.27	266.60	243.10
	50.41	52.98	75.78	31.87	211.42	31.87	11.31	1.36				
250	121.77	84.49	141.44	76.04	653.74	76.04	32.51	15.27	100	508.11	347.70	317.24
	67.40	65.05	102.30	42.36	266.90	42.36	18.52	1.35				
300	148.18	100.77	140.59	88.85	946.27	88.85	39.48	15.14	100	654.40	479.44	392.45
	74.10	76.71	128.98	50.81	323.26	50.81	12.53	1.31				
500	249.95	141.55	315.81	148.09	1481.09	148.09	64.57	15.40	100	1980.60	747.31	684.82
	117.02	114.57	172.77	66.46	475.46	66.46	15.31	1.41				
1000	484.49	274.11	789.50	296.17	3818.48	296.17	111.31	15.10	100	7181.33	1581.57	1458.10
	214.77	214.76	537.41	169.37	1064.65	169.37	57.66	1.24				

For these and larger input reserve sizes, all selected reserve values were developed.

NOTE: For each reserve size, the first row is mean values and the second row is standard deviations.

2. Because very little is known about reserve possibilities before a sale, any set of royalty provisions should produce acceptable results over a wide range of reserve possibilities. The systems tested produce marked differences in their ability to handle wide ranges of reserve possibilities. The royalty bid system yielded disastrous results. Very large social losses would likely result from use of this system. The higher fixed royalty and linear variable royalty caused losses for smaller expected reserve sizes but yielded significant ATNPV reductions for larger reserve sizes without any losses. The only systems which worked equally well on all expected reserve sizes were the semi-log and corresponding fixed schedule systems. For these systems, virtually nothing need be known about expected reserve sizes to formulate appropriate schedules. The reciprocal variable royalty system performed in between these extremes.

3. Decent cost information is vital to formulating acceptable royalty provisions. Cost uncertainty is not captured by any type of royalty system, so cost information is essential.²⁷ With decent cost information regarding conditions in a future sale area, variable royalty systems can be designed that are insensitive to reserve discoveries over a very wide range.²⁸

²⁷ This is not strictly true because cost per unit is a function of reserve size. Because royalty provisions can shift reserve uncertainty from the private to the public sector, some of the cost uncertainty is also shifted.

²⁸ This study used relatively large expected reserve sizes and relatively high costs. However, the same principles hold over other reservoir and cost ranges as shown in the Appendix.

The major policy recommendation which emerges from this study is that the government use semi-log or fixed schedule variable royalty systems in lieu of all other experimental royalty systems.²⁹ A parallel recommendation is that policy evaluation models such as GEN2 which was used in this study be modified so that more accurate and more robust cost subroutines may be used for future policy analysis.

²⁹ The fixed step function system may be preferred because of its simplicity.

APPENDIX

This appendix provides additional model simulations to provide sensitivity analysis and expand on some of the points raised in the text. The appendix is divided into three sections. The first section provides simulations with production time horizon fixed to determine how the results of the main text would change if production time horizon in reality is not flexible. The second section provides simulations for lower and higher cost regions than the Mid-Atlantic region used for the main study. The results of this section confirm that the conclusions are readily applicable to other cost regions. The last section provides a comparison of the cash bonus and fixed schedule (approximating a semi-log) systems under the assumption of expected rising prices for oil and gas.

Fixed production time horizon

As was discussed in the main text, the extent to which production time horizon can be varied is unknown. The assumption in the main text was that production capacity (and time horizon) could be varied and at no cost per unit of installed capacity. This extreme is not likely in reality. In this section, we present results of the other extreme-- production capacity and time horizon are fixed (for a given reserve size) and cannot be varied at any cost.

Table A-1 presents the results of the cash bonus system with fixed production time horizon. By comparing Table A-1 with Table 3 on page 23, one can readily see that the results are almost identical. The 40 million barrel field did not develop with fixed production time horizon,

Table A-1
Cash Bonus System with Fixed Production Time

	C	r	ATPV	Tru	Royalty	Expected	Gross	Expected	Installed	T	% Dev.	Peak	Smallest	P.V.	P.V.
			(mil.)	(mil.)	(mil.)	(mil.)	(mil.)	(mil.)	(mil.)	(incl. dev.)	(%)	Revenue (Mean Case)	Developed Reservoir	Government Revenue Bonus-ATPV (mil.)	Government Revenue Bonus-75%ATPV (mil.)
30	-4.94	-23	3.16	8.89	20.25	3.08	6.61	14.00	22	65.44	30.23	—	—	—	—
40	7.16	10.14	7.09	5.08	42.54	6.50	1.72	0.00	0.00	0.00	0.00	—	—	—	—
40	-21	6.80	7.92	11.85	47.54	7.39	7.42	14.00	47	87.25	37.85	—	—	—	—
60	11.44	15.00	9.99	6.77	59.95	9.31	2.15	0.00	0.00	0.00	0.00	—	—	—	—
60	14.04	17.73	16.46	17.77	98.71	15.58	9.55	14.00	77	130.88	39.12	48.23	44.72	44.72	44.72
80	18.97	22.26	13.17	10.16	79.02	12.34	3.30	0.00	0.00	0.00	0.00	—	—	—	—
80	19.28	28.79	13.98	23.69	143.64	22.74	11.60	14.00	91	174.51	39.66	81.55	74.23	74.23	74.23
100	22.37	32.79	15.44	18.44	166.14	28.13	14.53	14.00	96	218.13	42.51	113.63	102.43	102.43	102.43
100	44.81	38.14	30.68	28.62	184.02	29.13	14.53	14.00	96	218.13	42.51	113.63	102.43	102.43	102.43
120	33.89	35.93	18.84	19.42	113.02	17.58	5.93	0.00	0.00	0.00	0.00	—	—	—	—
120	60.85	46.22	37.42	35.54	274.46	35.54	16.78	14.00	100	261.76	43.67 ^a	146.49	131.28	131.28	131.28
140	41.44	42.67	21.83	20.32	130.94	20.32	7.27	0.00	0.00	0.00	0.00	—	—	—	—
140	76.92	57.71	43.65	41.46	261.87	41.46	19.58	14.00	100	305.39	47.28	178.28	159.05	159.05	159.05
160	49.37	50.69	25.47	23.71	152.76	23.71	8.47	0.00	0.00	0.00	0.00	—	—	—	—
160	93.21	67.26	49.49	47.39	299.28	47.39	22.37	14.00	100	349.01	50.01	210.36	187.06	187.06	187.06
180	57.36	58.36	29.10	27.10	174.59	27.10	9.68	0.00	0.00	0.00	0.00	—	—	—	—
180	109.69	76.85	56.13	53.31	386.69	53.31	25.17	14.00	100	392.64	52.67	242.67	215.25	215.25	215.25
200	109.69	66.48	37.44	35.44	186.48	35.44	10.68	0.00	0.00	0.00	0.00	—	—	—	—
200	126.32	86.47	62.16	59.23	374.10	59.23	27.97	14.00	100	436.27	55.27	275.15	243.57	243.57	243.57
250	72.30	74.36	36.38	33.87	218.23	33.87	12.10	0.00	0.00	0.00	0.00	—	—	—	—
250	168.40	110.67	77.95	74.04	467.62	74.04	34.96	14.00	100	345.33	57.02	357.02	316.92	316.92	316.92
300	93.86	94.28	45.47	42.34	222.79	42.34	15.12	0.00	0.00	0.00	0.00	—	—	—	—
300	211.04	135.01	93.34	88.85	561.35	88.85	41.95	14.00	100	654.40	60.83	439.59	386.83	386.83	386.83
500	114.38	114.28	54.57	50.81	327.35	50.81	16.15	0.00	0.00	0.00	0.00	—	—	—	—
500	395.06	231.24	155.90	148.09	935.24	148.09	69.92	14.00	100	1090.67	77.20	774.20	677.94	677.94	677.94
1000	197.39	194.85	90.95	84.69	545.58	84.69	30.24	0.00	0.00	0.00	0.00	—	—	—	—
1000	831.17	481.60	311.81	296.17	1870.49	296.17	139.84	14.00	100	2181.33	165.56	1654.56	1416.79	1416.79	1416.79
407.94	398.18	181.50	169.37	169.37	1091.16	169.37	60.49	0.00	0.00	0.00	0.00	—	—	—	—

^a For these and larger input reserve sizes, all selected reserve values were developed.

NOTE: For each reserve size, the first row is mean value and the second row is standard deviation.

but it was just positive for the original case.

Table A-2 presents the results of the semi-log system (slope = .09) with fixed production time horizon. The corresponding table in the main text is Table 11 on page 39. Here again the results are very similar. This similarity occurs because of the low variance in possible optimal production time (and capacity) values for the semi-log system. The difference between the optimal time and a time different by one or two years is very small (see Figure 3, page 14), so the difference between the optimized time and fixed time is correspondingly small.

This result is important because it tends to support the view that production time horizon would not be shifted significantly with an appropriate semi-log function. The payoff from optimization is simply too small relative to the probable costs.

Cost sensitivity analysis

The simulations reported in this section test the sensitivity of the results of the main text to lower and higher costs than those of the Mid-Atlantic region. Tables A-3 and A-4 display results for the cash bonus system and the semi-log variable royalty system using costs for the Gulf of Mexico. The coefficient of the semi-log function is 0.11 (0.09 was used for the Mid-Atlantic simulations--Table 11, page 39). Reviewing these tables and comparing them with Tables 3 and 11 of the main text will reveal that the semi-log variable royalty system works as well or better with Gulf of Mexico costs as Mid-Atlantic costs.

Tables A-5 and A-6 present the same two systems with Gulf of Alaska costs. The coefficient of the semi-log variable royalty in Table A-6 is 0.07. The main difference revealed by these tables is the increase in

Table A-2
semi-Log System with Fixed Production Time

	ATPRV	Tax	Royalty	Expected	Gross	Expected	Prod.	Installed	T	% Dev.	Peak	Smallest	P.V.	P.V.	P.V.
	(mil.\$)	(mil.\$)	P.V.	Reserve	Value	(mil.\$)	(mil.\$)	Capacity	(years)	if Met	Rate	Reservoir	Revenue	Revenue	Revenue
			(mil.\$)	(mil.\$)	(mil.\$)	(mil.\$)	(mil.\$)	(mil.\$)			(mil.\$)	(mil.\$)	(mil.\$)	(mil.\$)	(mil.\$)
30	-5.27	-0.07	4.00	8.89	20.25	3.08	1.08	6.61	14.00	72	65.44	38.23	--	--	--
40	-1.24	5.91	8.65	11.85	47.34	6.50	7.39	7.42	14.00	47	87.25	31.85	--	--	--
60	9.37	13.38	13.37	6.77	59.95	9.31	13.42	2.15	0.00	0.00	130.88	39.84	47.86	43.36	43.36
80	10.02	15.26	12.38	17.77	77.11	15.42	17.44	3.58	14.00	76	174.31	41.40	80.76	75.40	75.40
100	14.48	18.68	11.48	31.16	77.57	22.44	22.44	11.90	14.00	89	174.31	41.40	80.76	75.40	75.40
120	19.70	23.00	26.94	13.55	96.13	15.02	15.02	4.64	0.00	96	218.13	42.51	113.64	105.44	105.44
140	24.35	27.16	37.15	16.94	111.02	17.58	17.58	5.93	0.00	100	261.76	43.87*	146.49	135.48	135.48
160	28.92	31.31	45.97	20.32	130.94	20.32	20.32	7.26	0.00	100	304.39	178.29	210.37	193.93	193.93
180	33.72	36.21	55.73	23.71	152.76	23.71	23.71	8.47	0.00	100	349.01	242.65	275.15	253.37	253.37
200	37.77	41.95	62.97	27.39	179.49	27.39	27.39	10.00	0.00	100	392.64	337.02	374.70	357.02	357.02
250	43.08	45.72	76.06	30.49	196.41	30.49	30.49	10.89	0.00	100	436.27	439.61	484.87	464.87	464.87
300	47.66	50.35	86.56	33.87	218.23	33.87	33.87	12.10	0.00	100	545.33	545.40	604.87	574.20	574.20
350	58.83	61.63	113.63	42.34	272.79	42.34	42.34	15.12	0.00	100	654.40	1090.67	1624.59	1509.81	1509.81
400	69.46	72.52	141.69	50.81	327.35	50.81	50.81	16.15	0.00	100	1090.67	1624.59	1509.81	1509.81	1509.81
450	75.53	131.83	185.42	146.09	353.58	146.09	146.09	20.24	0.00	100	2181.33	1624.59	1509.81	1509.81	1509.81
500	85.12	272.93	897.54	256.17	1870.49	256.17	256.17	139.84	0.00	100	2181.33	1624.59	1509.81	1509.81	1509.81
1000	199.56	202.20	589.88	169.37	1051.16	169.37	169.37	60.49	0.00	100	2181.33	1624.59	1509.81	1509.81	1509.81

* For those and larger input reserve sizes, all selected reserve values were developed.

NOTE: For each reserve size, the first row is mean value and the second row is standard deviations.

Table A-3
Cash Bonus Case Using Gulf of Mexico Costs

Alt	Alt P.V.	TAX P.V.	Royalty P.V.	Expected Reserves	Gross Value P.V.	Expected Prod.	Installed Capacity	T (incl. Dev. cost)	% Dev. if not dev.	Peak Revenue (Mean Case)	Smallest Developed Reservoir	P.V. Government Revenue Bonus-RNPV	P.V. Government Revenue Bonus-Salt-PV
(mil.\$)	(mil.\$)	(mil.\$)	(mil.\$)	(mil.bbl.)	(mil.\$)	(mil.bbl.)	(mil.bbl.)	(years)		(mil.\$)	(mil.bbl.)	(mil.\$)	(mil.\$)
20	-27	3.41	4.70	5.92	25.18	3.94	3.62	14.12	51	43.63	18.29	--	--
30	6.94	8.32	4.96	3.36	29.74	4.64	1.07	14.33					
40	10.69	11.07	6.43	3.08	36.67	6.04	7.97	14.02	80	65.44	18.49	25.72	21.73
50	14.39	14.78	12.03	11.85	46.01	11.43	1.87	14.16					
60	18.15	18.11	18.11	17.77	57.23	17.77	2.33	14.00	92	87.25	19.40	43.11	39.04
70	22.04	22.04	22.04	22.04	69.47	22.04	8.39	14.00	100	130.88	24.42*	76.97	64.68
80	26.04	26.04	26.04	26.04	82.64	26.04	11.19	14.00	100	174.31		110.04	97.50
100	36.72	36.72	36.72	36.72	109.12	36.72	13.98	14.00	100	218.13		143.49	126.42
120	47.11	47.11	47.11	47.11	136.94	47.11	16.94	14.00	100	261.76		177.20	155.94
140	57.34	57.34	57.34	57.34	165.16	57.34	19.76	14.00	100	305.39		211.09	185.41
160	67.50	67.50	67.50	67.50	193.69	67.50	22.37	14.00	100	349.01		245.15	215.02
180	77.50	77.50	77.50	77.50	222.46	77.50	25.17	14.00	100	392.64		279.37	244.72
200	87.01	87.01	87.01	87.01	251.31	87.01	27.97	14.00	100	436.27		313.59	274.59
250	107.37	107.37	107.37	107.37	336.67	107.37	33.67	14.00	100	545.33		399.62	349.21
300	127.16	127.16	127.16	127.16	422.34	127.16	39.24	14.00	100	654.40		486.04	424.23
400	167.04	167.04	167.04	167.04	561.15	167.04	41.95	14.00	100	834.00		634.00	561.15
500	210.08	210.08	210.08	210.08	700.81	210.08	49.92	14.00	100	1090.67		834.00	726.20
1000	897.21	897.21	897.21	897.21	1870.49	897.21	139.84	14.00	100	2181.33		1711.43	1487.13
427.16	427.16	427.16	427.16	427.16	1891.16	427.16	169.37	6.00					

* For these and larger input reserve sizes, all selected reserve values were developed.

For each reserve size, the first row is mean values and the second row is standard deviations.

Table A-4
Semi-Log Function Using Gulf of Mexico Coasts

Year	ATWV P.V.	TAX P.V.	Royalty P.V.	Expected Reserve	Gross Value P.V.	Expected Prd.	Installed Capacity	T (incl. if wet dev.)	Peak Revenue (Mean Case)	Smallest Reservoir	P.V. Government Revenue Bonus-ATWV	P.V. Government Revenue Bonus-ATWV
1	(mil.\$)	(mil.\$)	(mil.\$)	(mil.bbl.)	(mil.\$)	(mil.bbl.)	(mil.bbl.)	(years)	(mil.\$)	(mil.bbl.)	(mil.\$)	(mil.\$)
20	0.01	3.53	4.24	5.92	25.71	4.14	3.38	15.25	55	15.77	7.78	7.78
30	6.42	7.07	5.36	3.39	26.52	4.59	4.98	15.22	83	19.56	25.68	25.68
40	0.88	10.19	9.11	5.08	36.92	5.90	4.29	15.73				23.90
60	13.64	13.32	15.70	11.85	71.14	11.54	5.42	15.09	94	81.30	42.66	36.25
80	11.17	12.23	13.42	6.77	45.44	7.17	2.33	7.79				66.60
100	25.81	20.95	29.29	17.77	110.49	17.77	6.04	14.73	100	121.95	76.05	99.82
120	15.87	16.71	22.88	10.16	65.11	10.16	10.86	14.51	100	174.51	109.15	130.54
140	17.22	21.69	32.16	23.69	146.08	23.69	15.55	14.66	100	218.13	176.31	161.53
160	48.34	34.13	60.14	29.62	185.99	29.62	16.02	14.38	100	261.76	210.26	192.86
180	29.12	40.35	76.84	35.54	223.10	35.54	16.48	14.60	100	305.39	244.32	224.57
200	29.61	30.54	55.64	20.32	130.38	20.32	7.19	14.56	100	349.01	278.43	255.99
230	35.83	34.78	67.45	23.71	152.09	23.71	8.37	14.17	100	392.64	312.61	287.72
260	79.80	52.19	112.33	47.39	296.13	47.39	22.12	14.13	100	436.27	346.44	367.67
290	37.91	36.87	79.50	27.10	173.68	27.10	9.53	14.15	100	480.90	380.44	448.23
320	46.77	51.86	120.76	51.31	335.49	51.31	24.90	14.16	100	525.53	429.43	472.49
350	46.77	51.86	120.76	51.31	335.49	51.31	24.90	14.16	100	570.16	474.06	517.12
380	98.53	63.42	149.68	59.23	372.81	59.23	27.71	14.51	100	614.79	518.11	561.20
410	45.71	46.68	104.58	33.87	216.98	33.87	11.87	14.31	100	659.42	563.44	606.67
440	123.08	76.76	198.60	74.04	446.13	74.04	34.62	14.13	100	704.05	608.44	651.69
470	54.89	55.86	137.35	42.34	271.26	42.34	14.84	14.12	100	748.68	653.43	696.23
500	145.60	86.44	249.59	88.85	559.47	88.85	41.57	14.12	100	793.31	698.43	741.23
530	63.55	64.52	171.26	50.81	375.45	50.81	17.80	14.18	100	837.94	743.43	786.23
560	227.28	135.45	466.20	144.09	910.00	144.09	68.82	14.51	100	882.57	788.43	831.23
590	94.35	95.35	311.50	84.69	514.15	84.69	28.91	14.51	100	927.20	833.43	876.23
620	398.41	230.11	1015.68	264.17	1131.22	264.17	131.72	14.51	100	971.83	878.43	921.23
650	154.89	156.26	626.77	168.37	1000.37	168.37	53.63	14.51	100	1016.46	923.43	966.23

* For these mid larger input reserve sizes, all selected reserve value were developed.

† For each reserve size, the first row is mean value and the second row is standard deviation.

Table A-3
Cash Bonus System With Gulf of Alaska Coast

Unit P. J. a	ATVP (mil. \$)	Tan P. V. (mil. \$)	Royalty P. V. (mil. \$)	Expected Reserve (mil. bbl.)	Gross P. V. (mil. \$)	Expected Prod. (mil. bbl.)	Installed Capacity (mil. bbl.)	T (incl. dev.) (years)	% Dev. (if met)	Peak Revenue (Mean Case) (mil. \$)	Smallest Developed Reservoir (mil. bbl.)	P. V. Government Bonus-ATVP (mil. \$)	P. V. Contract Revenue Bonus-ATVP (mil. \$)
40	-8.50	-2.50	2.46	11.85	14.75	2.27	8.85	15.73	11	67.32	59.49	--	--
60	-2.50	6.90	9.30	17.77	46.43	7.10	2.80	15.60	35	109.45	44.89	--	--
80	14.24	20.60	14.66	10.16	87.93	13.80	3.69	15.07	59	153.31	68.07	44.49	42.39
100	21.93	26.71	19.12	13.55	114.67	18.00	4.70	14.78	76	203.24	66.39	77.40	71.95
120	21.82	26.79	26.79	28.62	160.74	25.70	15.35	14.78	86	261.76	66.00	109.63	100.65
140	33.91	38.06	34.66	35.44	202.93	31.10	15.18	14.51	91	305.39	69.41	140.75	128.17
160	36.38	41.78	34.66	20.32	147.94	23.09	2.13	14.50	94	349.01	68.05	171.79	155.52
180	50.34	48.71	41.70	41.46	250.15	39.79	20.30	14.40	100	436.27	73.13 ^a	216.02	212.09
200	65.09	56.20	46.50	47.39	290.92	46.14	22.98	14.21	100	545.33	73.13 ^a	313.49	280.04
250	80.34	68.27	55.56	53.31	333.28	52.86	25.32	14.17	100	654.40	73.13 ^a	392.64	348.82
300	96.62	82.20	63.42	60.49	380.49	61.08	30.96	14.06	100	774.40	73.13 ^a	484.00	428.00
350	114.00	98.10	76.46	67.81	433.14	70.17	35.81	14.04	100	894.40	73.13 ^a	584.00	514.00
400	134.59	101.19	77.92	74.04	487.43	74.04	36.92	14.04	100	1014.40	73.13 ^a	684.00	604.00
450	154.43	104.27	75.50	81.34	541.10	81.34	38.04	14.04	100	1134.40	73.13 ^a	784.00	704.00
500	174.30	124.56	93.53	88.85	595.10	88.85	41.94	14.01	100	1254.40	73.13 ^a	884.00	804.00
550	195.00	147.57	104.50	96.81	649.10	96.81	46.16	14.00	100	1374.40	73.13 ^a	984.00	904.00
600	216.16	169.38	115.90	104.09	703.24	104.09	50.41	14.00	100	1494.40	73.13 ^a	1084.00	1004.00
650	238.16	185.64	126.95	111.69	757.43	111.69	54.66	14.00	100	1614.40	73.13 ^a	1184.00	1104.00
700	261.17	204.53	138.81	119.81	811.62	119.81	58.91	14.00	100	1734.40	73.13 ^a	1284.00	1204.00
750	284.42	225.60	151.50	128.37	865.81	128.37	63.16	14.00	100	1854.40	73.13 ^a	1384.00	1304.00

^a For these and larger input reserve often, all selected reserve values were developed.

NOTE: For each reserve size, the first row is mean value and the second row is standard deviation.

Table A-6
Sealing System with Gulf of Alaska Cots

Rate	ATPV	Tax	Royalty	Expected	Gross	Expected	Installed	Y	Peak	Smallest	P.V.	P.V.
(¢/sq. ft.)	(mil. \$)	(mil. \$)	(mil. \$)	Reserve	Value	Prod.	Capacity	(incl. 2 Der. if Met. (yr))	Revenue (Per Case)	Disposal Reserve	Revenue (mil. \$)	Revenue (mil. \$)
40	-8.53	-2.53	2.37	11.85	14.18	2.27	8.14	17.18	11	67.52	59.49	--
50	5.99	10.08	7.71	6.77	44.53	7.18	2.60	17.46	37	104.96	63.46	--
60	-2.77	6.89	9.85	17.77	55.39	9.23	9.78	17.46	37	104.96	63.46	--
80	12.75	18.38	15.97	10.16	84.00	13.91	3.15	1.10	1.10	1.10	44.10	42.38
100	6.90	37.02	20.18	23.69	105.97	17.78	11.69	17.03	61	139.95	66.57	44.10
120	18.67	25.75	23.20	13.55	109.06	17.95	4.76	1.14	1.14	1.14	76.16	71.65
140	18.03	26.66	21.47	29.62	155.73	26.13	13.66	16.73	78	182.41	64.01	108.08
160	33.82	36.66	23.55	16.94	125.74	20.44	5.51	1.14	1.14	1.14	108.08	100.75
180	28.82	35.48	43.98	18.00	135.00	23.00	1.94	16.34	88	229.97	67.89	138.22
200	40.46	43.22	36.34	41.46	242.27	40.00	18.46	15.95	92	248.30	68.05	169.80
250	51.86	51.17	66.77	47.39	284.31	46.60	20.99	15.25	96	325.19	65.81	201.58
300	63.36	58.96	79.26	53.31	325.58	53.06	23.50	15.34	99	365.84	65.81	214.37
350	74.80	66.31	91.86	59.23	365.30	59.23	26.33	15.30	100	406.49	73.12	231.07
400	85.24	73.04	104.87	65.15	406.49	65.15	29.16	15.18	100	447.14	73.12	248.30
450	95.68	80.12	117.89	71.07	447.14	71.07	32.00	14.87	100	487.79	73.12	265.74
500	106.12	87.49	130.90	77.00	487.79	77.00	34.84	14.55	100	528.44	73.12	283.18
550	116.56	94.86	143.91	82.93	528.44	82.93	37.68	14.24	100	569.09	73.12	300.62
600	127.00	102.23	156.92	88.85	569.09	88.85	40.52	13.93	100	609.74	73.12	318.06
650	137.44	109.60	169.93	94.78	609.74	94.78	43.36	13.62	100	650.39	73.12	335.50
700	147.88	116.97	182.94	100.71	650.39	100.71	46.20	13.31	100	691.04	73.12	352.94
750	158.32	124.34	195.95	106.64	691.04	106.64	49.04	13.00	100	731.69	73.12	370.38
800	168.76	131.71	208.96	112.57	731.69	112.57	51.88	12.69	100	772.34	73.12	387.82
850	179.20	139.08	221.97	118.50	772.34	118.50	54.72	12.38	100	812.99	73.12	405.26
900	189.64	146.45	234.98	124.43	812.99	124.43	57.56	12.07	100	853.64	73.12	422.70
950	199.08	153.82	247.99	130.36	853.64	130.36	60.40	11.76	100	894.29	73.12	440.14
1000	209.52	161.19	261.00	136.29	894.29	136.29	63.24	11.45	100	934.94	73.12	457.58
1050	219.96	168.56	274.01	142.22	934.94	142.22	66.08	11.14	100	975.59	73.12	475.02
1100	230.40	175.93	287.02	148.15	975.59	148.15	68.92	10.83	100	1016.24	73.12	492.46
1150	240.84	183.30	300.03	154.08	1016.24	154.08	71.76	10.52	100	1056.89	73.12	509.90
1200	251.28	190.67	313.04	160.01	1056.89	160.01	74.60	10.21	100	1097.54	73.12	527.34
1250	261.72	198.04	326.05	165.94	1097.54	165.94	77.44	9.90	100	1138.19	73.12	544.78
1300	272.16	205.41	339.06	171.87	1138.19	171.87	80.28	9.59	100	1178.84	73.12	562.22
1350	282.60	212.78	352.07	177.80	1178.84	177.80	83.12	9.28	100	1219.49	73.12	579.66
1400	293.04	220.15	365.08	183.73	1219.49	183.73	85.96	8.97	100	1260.14	73.12	597.10
1450	303.48	227.52	378.09	189.66	1260.14	189.66	88.80	8.66	100	1300.79	73.12	614.54
1500	313.92	234.89	391.10	195.59	1300.79	195.59	91.64	8.35	100	1341.44	73.12	631.98
1550	324.36	242.26	404.11	201.52	1341.44	201.52	94.48	8.04	100	1382.09	73.12	649.42
1600	334.80	249.63	417.12	207.45	1382.09	207.45	97.32	7.73	100	1422.74	73.12	666.86
1650	345.24	257.00	430.13	213.38	1422.74	213.38	100.16	7.42	100	1463.39	73.12	684.30
1700	355.68	264.37	443.14	219.31	1463.39	219.31	103.00	7.11	100	1504.04	73.12	701.74
1750	366.12	271.74	456.15	225.24	1504.04	225.24	105.84	6.80	100	1544.69	73.12	719.18
1800	376.56	279.11	469.16	231.17	1544.69	231.17	108.68	6.49	100	1585.34	73.12	736.62
1850	387.00	286.48	482.17	237.10	1585.34	237.10	111.52	6.18	100	1625.99	73.12	754.06
1900	397.44	293.85	495.18	243.03	1625.99	243.03	114.36	5.87	100	1666.64	73.12	771.50
1950	407.88	301.22	508.19	248.96	1666.64	248.96	117.20	5.56	100	1707.29	73.12	788.94
2000	418.32	308.59	521.20	254.89	1707.29	254.89	120.04	5.25	100	1747.94	73.12	806.38
2050	428.76	315.96	534.21	260.82	1747.94	260.82	122.88	4.94	100	1788.59	73.12	823.82
2100	439.20	323.33	547.22	266.75	1788.59	266.75	125.72	4.63	100	1829.24	73.12	841.26
2150	449.64	330.70	560.23	272.68	1829.24	272.68	128.56	4.32	100	1869.89	73.12	858.70
2200	460.08	338.07	573.24	278.61	1869.89	278.61	131.40	4.01	100	1910.54	73.12	876.14
2250	470.52	345.44	586.25	284.54	1910.54	284.54	134.24	3.70	100	1951.19	73.12	893.58
2300	480.96	352.81	599.26	290.47	1951.19	290.47	137.08	3.39	100	1991.84	73.12	911.02
2350	491.40	360.18	612.27	296.40	1991.84	296.40	140.00	3.08	100	2032.49	73.12	928.46
2400	501.84	367.55	625.28	302.33	2032.49	302.33	142.84	2.77	100	2073.14	73.12	945.90
2450	512.28	374.92	638.29	308.26	2073.14	308.26	145.68	2.46	100	2113.79	73.12	963.34
2500	522.72	382.29	651.30	314.19	2113.79	314.19	148.52	2.15	100	2154.44	73.12	980.78
2550	533.16	389.66	664.31	320.12	2154.44	320.12	151.36	1.84	100	2195.09	73.12	998.22
2600	543.60	397.03	677.32	326.05	2195.09	326.05	154.20	1.53	100	2235.74	73.12	1015.66
2650	554.04	404.40	690.33	331.98	2235.74	331.98	157.04	1.22	100	2276.39	73.12	1033.10
2700	564.48	411.77	703.34	337.91	2276.39	337.91	160.00	0.91	100	2317.04	73.12	1050.54
2750	574.92	419.14	716.35	343.84	2317.04	343.84	162.84	0.60	100	2357.69	73.12	1067.98
2800	585.36	426.51	729.36	349.77	2357.69	349.77	165.68	0.29	100	2398.34	73.12	1085.42
2850	595.80	433.88	742.37	355.70	2398.34	355.70	168.52	0.00	100	2438.99	73.12	1102.86
2900	606.24	441.25	755.38	361.63	2438.99	361.63	171.36	0.00	100	2479.64	73.12	1120.30
2950	616.68	448.62	768.39	367.56	2479.64	367.56	174.20	0.00	100	2520.29	73.12	1137.74
3000	627.12	455.99	781.40	373.49	2520.29	373.49	177.04	0.00	100	2560.94	73.12	1155.18
3050	637.56	463.36	794.41	379.42	2560.94	379.42	180.00	0.00	100	2601.59	73.12	1172.62
3100	648.00	470.73	807.42	385.35	2601.59	385.35	182.84	0.00	100	2642.24	73.12	1190.06
3150	658.44	478.10	820.43	391.28	2642.24	391.28	185.68	0.00	100	2682.89	73.12	1207.50
3200	668.88	485.47	833.44	397.21	2682.89	397.21	188.52	0.00	100	2723.54	73.12	1224.94
3250	679.32	492.84	846.45	403.14	2723.54	403.14	191.36	0.00	100	2764.19	73.12	1242.38
3300	689.76	500.21	859.46	409.07	2764.19	409.07	194.20	0.00	100	2804.84	73.12	1259.82
3350	699.20	507.58	872.47	415.00	2804.84	415.00	197.04	0.00	100	2845.49	73.12	1277.26
3400	709.64	514.95	885.48	420.93	2845.49	420.93	200.00	0.00	100	2886.14	73.12	1294.70
3450	719.08	522.32	898.49	426.86	2886.14	426.86	202.84	0.00	100	2926.79	73.12	1312.14
3500	729.52	529.69	911.50	432.79	2926.79	432.79	205.68	0.00	100	2967.44	73.12	1329.58
3550	739.96	537.06	924.51	438.72	2967.44	438.72	208.52	0.00	100	3008.09	73.12	1347.02
3600	750.40	544.43	937.52	444.65	3008.09	444.65	211.36	0.00	100	3048.74	73.12	1364.46
3650	760.84	551.80	950.53	450.58	3048.74	450.58	214.20	0.00	100	3089.39	73.12	1381.90
3700	771.28	559.17	963.54	456.51	3089.39	456.51	217.04	0.00	100	3129.94	73.12	1399.34
3750	781.72	566.54	976.55	462.44	3129.94	462.44	220.00	0.00	100	3170.59	73.12	1416.78
3800	792.16	573.91	989.56	468.37	3170.59	468.37	222.84	0.00	100	3211.24	73.12	1434.22
3850	802.60	581.28	1002.57	474.30	3211.24	474.30	225.68	0.00	100	3251.89	73.12	1451.66
3900	813.04	588.65	1015.58	480.23	3251.89	480.23	228.52	0.00	100	3292.54	73.12	1469.10
3950	823.48	596.02	1028.59	486.16	3292.54	486.16	231.36	0.00	100	3333.19	73.12	1486.54
4000	833.92	603.39	1041.60	492.09	3333.19	492.09	234.20	0.00	100	33		

minimum field size developed. The smallest expected reserve having a positive ATNPV is 80 million barrels for both systems. With the 0.07 slope, the semi-log variable royalty does exhibit some production prolongation, but not to a major extent. To eliminate all prolongation, a lower coefficient could be used. Other than these effects, the Gulf of Alaska costs yield the same results as were experienced for other regions.

The basic conclusion of the cost sensitivity analysis is that the semi-log variable royalty system can work equally well in cost regions other than the Mid-Atlantic. With adequate cost information, the semi-log function (or a fixed schedule designed after the semi-log) can yield satisfactory results under a wide range of reserve and cost situations.

Expectation of rising oil and gas prices

The results in this section answer the question, "How would the systems differ under the expectation of rising (rather than constant) prices?" For the simulations, both oil and gas prices were expected to rise at a 3 percent annual rate. (The mean price change was 3 percent and the standard deviation was 4 percent.) Table A-7 displays the results of the cash bonus system and Table A-8 displays the rising price results of a fixed schedule system patterned after the semi-log function. The corresponding text tables are Table 3, page 23 and Table 13, page 43. Both the cash bonus and fixed schedule system exhibited some prolongation of production time horizon relative to the constant price cases. This is to be expected because higher future prices reduce the incentive to produce quickly—the resource is more valuable later.

Table A-7
Cash Bonus System With Biting Price

P	C	ATW	Tax	Royalty	Expected	Gross	Expected	Installed	Y	2 Rev.	Peak	Smallest	P.V.	P.V.
(mil.)	(mil.)	(mil.)	(mil.)	(mil.)	(mil.)	(mil.)	(mil.)	(mil.)	(Incl. Dec.)	(% net)	(Rev. Case)	(Reservoir)	(Revenue Bonus)	(Revenue Bonus)
(mil.)	(mil.)	(mil.)	(mil.)	(mil.)	(mil.)	(mil.)	(mil.)	(mil.)	(Incl. Dec.)	(% net)	(Rev. Case)	(Reservoir)	(Revenue Bonus)	(Revenue Bonus)
30	2.81	6.51	0.68	0.89	52.09	52.09	6.45	4.67	16.22	58	70.62	25.77	20.10	19.37
40	12.43	15.45	9.31	5.08	55.86	55.86	6.81	1.71	1.38	80	98.93	26.63	43.48	40.23
50	17.16	19.74	11.16	6.77	66.98	66.98	8.05	2.38	1.42	95	168.00	26.41	86.95	78.61
60	23.48	27.35	15.27	9.16	84.61	84.61	10.64	3.73	1.15	100	225.20	29.250	130.16	116.49
80	34.67	43.02	32.67	23.69	196.80	196.80	21.69	10.98	14.46	100	225.20	29.250	130.16	116.49
100	37.18	38.25	19.12	13.55	114.68	114.68	13.55	4.87	.85	100	281.50	172.63	172.63	153.56
120	47.82	48.73	23.85	16.94	143.05	143.05	16.94	6.12	.60	100	337.80	215.58	215.58	191.01
140	58.37	58.26	28.56	20.32	171.48	171.48	20.32	7.29	.36	100	384.10	258.91	258.91	228.77
160	68.38	68.64	33.34	23.71	200.02	200.02	23.71	8.56	.27	100	430.41	302.51	302.51	266.74
180	78.10	68.46	38.10	27.10	228.34	228.34	27.10	9.69	.10	100	472.12	346.72	346.72	304.87
200	85.81	102.11	43.40	30.49	257.11	257.11	30.49	10.90	.10	100	563.01	383.16	383.16	343.16
250	102.16	101.77	47.62	33.87	285.65	285.65	33.87	12.10	0.00	100	703.76	501.00	501.00	439.42
300	129.22	128.53	59.37	42.34	357.06	357.06	42.34	15.12	0.00	100	844.51	612.38	612.38	536.74
350	152.43	155.39	71.14	50.81	428.48	428.48	50.81	18.12	0.00	100	1407.52	1062.17	1062.17	976.92
400	169.22	263.40	119.05	86.69	516.13	516.13	86.69	20.26	0.00	100	2815.03	2700.50	2700.50	1914.76
1000	1162.95	646.73	407.82	286.17	7646.40	7646.40	286.17	170.44	16.00	100	2815.03	2700.50	2700.50	1914.76
	531.70	535.30	238.09	168.17	1628.76	1628.76	168.17	60.49	0.00					

a For these and larger input reserve sizes, all selected reserve values were developed.

NOTE: For each reserve size, the first row is mean value and the second row is standard deviation.

Table A-8
Piled Schedule System with Rising Prices

Unit Price (mil.)	Atmop (mil.)	Tax P.V. (mil.)	Poplty P.V. (mil.)	Expected Reserve (mil.)	Gross Value P.V. (mil.)	Expected Prod. (mil.)	Installed Capacity (mil.)	T (days)	g Nov. Eff Net (years)	Peak Revenue (Mean Case) (mil.)	Smallest Revenue (Mean Case) (mil.)	P.V. Government Revenue Bonus-ATMOP (mil.)	P.V. Government Revenue Bonus-ATMOP (mil.)
30	5.41	9.09	8.38	8.89	53.31	4.84	4.19	17.81	63	70.62	24.31	21.08	20.18
40	12.48	15.32	14.46	5.08	52.65	6.60	1.38	1.53	17.68	87.15	23.74	43.06	38.89
50	15.14	17.98	13.50	6.77	63.87	7.93	2.04	1.92	17.22	96	157.37	85.07	77.45
60	28.48	27.87	27.22	17.77	137.04	17.40	7.30	1.74	17.22	100	108.32	126.00	114.50
70	41.55	38.11	27.84	20.16	185.22	17.55	3.34	1.76	17.22	100	108.32	126.00	114.50
80	44.95	38.11	27.84	20.16	185.22	17.55	3.34	1.76	17.22	100	108.32	126.00	114.50
90	42.16	47.82	32.32	13.55	109.92	13.55	4.50	1.90	16.71	100	262.79	162.85	153.31
100	35.68	57.76	44.42	16.94	138.97	16.94	5.76	1.77	16.39	100	270.90	200.98	180.45
120	78.13	57.17	74.68	35.34	287.41	35.34	14.82	1.98	16.74	100	367.21	250.76	226.94
140	93.29	66.48	90.49	41.46	327.13	41.46	16.94	1.90	16.06	100	450.41	294.76	267.05
160	106.81	75.47	106.93	47.39	372.41	47.39	18.97	1.66	16.06	100	472.12	336.39	303.26
180	126.51	86.10	127.38	53.31	429.98	53.31	22.53	1.70	16.09	100	470.80	380.45	365.51
200	170.76	93.15	162.54	59.23	473.44	59.23	25.17	2.16	15.95	100	588.50	687.14	643.14
250	69.39	71.31	108.10	33.87	280.43	33.87	11.67	1.82	15.85	100	844.51	596.37	563.18
300	84.78	86.64	141.16	47.36	368.74	47.36	14.43	1.57	15.80	100	1407.52	1032.17	944.41
350	100.35	102.05	176.50	60.85	419.58	60.85	17.48	1.57	15.57	100	2673.18	2142.74	1976.86
400	131.06	112.30	276.38	86.16	504.89	86.16	23.08	1.82	15.57	100			
1000	663.67	387.94	1071.15	296.17	2318.47	296.17	127.73	1.82					
	282.81	282.92	711.86	168.37	1309.36	168.37	56.53						

a For those and larger input reserve alone, all selected reserve values were developed.

NOTE: For each research also, the first row is mean value and the second row is standard deviation.

However, the prolongation was not major for either system amounting to one year or less in most cases. The only other major impact of rising prices is the obvious one—the values are higher. These results indicate that the semi-log or fixed schedule variable royalty system can also perform well under the assumption of rising oil and gas prices.

Summary

The general conclusion of this appendix is that the analyses support the conclusions of the main text. Three major points emerge:

(1) Because the fixed time horizon and optimized time horizon results were very similar, it is likely that little production postponement will occur so long as the semi-log coefficient is selected with appropriate cost data.

(2) The results of the main text hold in other cost regions with lower and higher costs than the Mid-Atlantic.

(3) The semi-log and fixed schedule systems also perform well under the assumption of rising (rather than constant) prices.

The conclusions of the analyses for oil would also hold for gas fields. In the GEN2 model (and in other models), oil and gas recovery are modeled in the same manner, so oil and gas behave the same way in leasing policy simulations.

EVALUATION OF PROFIT SHARE LEASING SYSTEMS

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March 1979
Leasing Policy Development Office

Introduction

The Outer Continental Shelf Lands Act Amendments of 1978 (the "Amendments"), P.L. 95-372, 92 Stat. 629, were signed into law on September 18, 1978, "... to establish a policy for the management of oil and natural gas on the Outer Continental Shelf; to protect the marine and coastal environment;" and for other related purposes.¹ The Amendments constitute a sweeping revision of the Outer Continental Shelf Lands Act of 1953, Pub. L. 212, 67 Stat. 462, 43 U.S.C. 1331 et seq.² Sections of the 1953 Act that specified policies and procedures for leasing Federal lands on the Outer Continental Shelf ("OCS") were one of many areas that underwent substantial modification. In particular, the Amendments now specifically authorize the use of several new leasing systems and, in fact, require the use of bidding systems other than the cash bonus-fixed royalty

¹U.S., Congress, House, Committee of Conference for S. 9, Outer Continental Shelf Lands Act Amendments of 1978, Conference Report to accompany S.9, Report No. 95-1474, 95th Cong., 2nd sess., August 10, 1978, p. 1, 75. Referred to hereafter as the "Conference Report."

²The Outer Continental Shelf Lands Act, as amended, 43 U.S.C. 1331 et seq., is referred to hereafter as "OCSLA."

system for at least 20 percent of tracts offered over the next five years.³

The Congress, throughout its discussion of the Amendments, indicated a special interest in using one new leasing system -- the profit share system.⁴ However, profit share leasing can take many forms. This study examines several types of profit share systems that fall into the (new) leasing system category defined by OCSLA section 8(a)(1)(D): "cash bonus bid with a fixed share of the net profits of no less than 30 per centum to be derived from the production of oil and gas from the lease area." The object is to determine the profit share system, belonging to this category, most appropriate for the first implementation of profit share leasing.

³"Bidding systems other than bonus bidding, including royalty, net profit, work commitment and nonenumerated systems, are to be utilized in at least 20 percent and not more than 60 percent of the tracts offered for leasing in all OCS areas during each of the next 5 years." Conference Report, p. 92. This requirement is contained in OCSLA, §8(a)(5)(B).

⁴"The committee believes that net profit share and other arrangements can be effective in shifting Government revenue away from initial bonuses and into deferred payments made out of leaseholder's profits based on actual production of oil and gas." U.S., Congress, Senate, Committee on Energy and Natural Resources, Outer Continental Shelf Lands Act Amendments of 1977, S. Rept. 95-284 to accompany S.9, 95th Cong., 1st sess., 1977, p. 73. Referred to hereafter as the "Senate Report."

The analysis proceeds as follows. First, a background section briefly traces legislative debate on the Amendments, particularly alternative leasing systems, to determine characteristics of leasing systems that Congress recognizes as important for achieving objectives of the OCSLA. These criteria guide the selection of a profit share system. Congress's overall policy objectives for management of the OCS are also analyzed and redefined in economic terms that allow discrimination among leasing systems, and selection of a profit share system best suited to meet these objectives.

Next, previous research on profit share systems is briefly reviewed. This research identifies three profit share systems as (a) having properties consistent with Congress's objectives, and (b) reasonably easy to implement and administer. These systems are the fixed capital recovery system, the investment account system, and the annuity capital recovery system.

These three systems are then analyzed in detail. The behavior of each system is simulated with a computer model over a wide range of leasing parameters (e.g., profit share rates, interest rates, capital recovery factors, etc.), reserve sizes, and geological (cost) regions. Simulation results are analyzed to determine which system best accommodates the design criteria and policy objectives.

Finally, the profit share system selected as "best" is compared with other alternative leasing systems to

illustrate the benefits attributed to profit share leasing.

Background

The first legislation dealing with policies and procedures for leasing Federal lands on the Outer Continental Shelf (OCS) was the OCS Lands Act of 1953. Following passage of this statute there developed an ongoing discussion, primarily in academic literature, of advantages and disadvantages attributed to bidding systems authorized in the original (1953) legislation (cash bonus and royalty bidding systems) and other "alternative" leasing systems. Conflicting priorities brought this debate to national attention in the early 1970's. The potential for environmental damage from OCS development was already a divisive issue, at least in affected coastal regions, when the Arab oil embargo of 1973 accentuated the need for rapid energy resource development. With this came increased pressure for accelerated development of Federal OCS resources. These issues collided in the period following the OPEC oil embargo, as the Federal government made its first attempts to craft an energy policy consistent with the environmental concerns of parties affected by OCS development.

The OCS Lands Act Amendments of 1978 embody the resulting legislative compromise. The amended OCSLA is a major revision and extension of the original 1953 legislation. Congress believes these changes will "expedite the systematic development of the OCS, while protecting our marine and coastal environment."⁵ A basic objective of the Amendments is to promote a "swift, orderly and efficient exploitation of our almost untapped domestic oil and gas resources on the OCS."⁶

Explicit in the Amendments is Congress's conclusion that terms and conditions under which leases are awarded, i.e., the bidding and leasing process, have an important effect on orderly and efficient resource development. In particular, "with the present shortage of investment capital that will prevail for many years, increasing risk of uncertainty, and the increasing integration and concentration of energy

⁵U.S., Congress, House, Ad Hoc Select Committee on the Outer Continental Shelf, Outer Continental Shelf Lands Act Amendments of 1977, Report No. 95-590 to accompany H.R.1614, 95th Cong. 1st sess., 1977, p. 53. This document is referred to hereafter as the "House Report."

⁶House Report, p. 53. Also, a stated purpose of the OCSLA is to "establish policies and procedures... intended to result in expedited exploration and development of the Outer Continental Shelf ..." OCSLA, § 102(1).

industries, there is some doubt whether cash bonus bidding remains the best system for the future."⁷

Thus, Congress directed through the Amendments that new bidding arrangements be developed and used on an experimental basis,⁸ so as to "...strike a proper balance between securing a fair market return to the Federal Government for the lease of its lands, increasing competition in exploitation of resources, and providing the incentive of a fair profit to the oil companies, which must risk their investment capital."⁹ Congress specifically authorized the use of new systems by (1) enumerating the additional bidding systems that are now available for use, and (2) including an option for developing new systems not specifically identified in the legislation. Congress left unchanged the requirement that leases be awarded by competitive bidding to the highest qualified bidder under regulations promulgated in advance.¹⁰

Congress's general objectives for administering the OCS leasing program are detailed in the conference report for

⁷House Report, p. 54.

⁸See footnote 3.

⁹House Report, p. 54.

¹⁰OCSLA, §8(a)(1).

the Amendments.¹¹ All are integral to the development of a comprehensive OCS leasing policy. However, these objectives are not all equally affected by the selection of a particular leasing system. The following guidelines restate objectives that are directly influenced by the design and selection of leasing systems, and thus allow discrimination between particular systems:

- (1) providing a fair return to the Federal Government;
- (2) increasing competition;
- (3) avoiding undue speculation;
- (4) timely and efficient exploration, development, and production of OCS oil and gas resources;
- (5) limiting administrative burdens of government and industry.

¹¹Although previous versions of the Amendments included sections that detailed reasons for using the new leasing systems, the conferees agreed that an expression of purposes and policies was more properly included in the final conference report. This statement is as follows:

The conferees intend that in utilizing the new bidding alternatives, a wide variety of considerations should be taken into account, including, but not limited to: (i) providing a fair return to the Federal Government; (ii) increasing competition; (iii) assuring competent and safe operations; (iv) avoiding undue speculation; (v) avoiding unnecessary delays in exploration, development, and production; (vi) discovering and recovering oil and gas; (vii) developing new oil and gas resources in an efficient and timely manner; and (viii) limiting administrative burdens on government and industry. Conference Report, p. 92.

The first four criteria have generally guided the development of royalty based leasing systems. The fourth objective is particularly important when viewed from the perspective of the National Energy Act, a basic goal of which is to stimulate domestic energy production. The fifth guideline is focused primarily on profit share leasing systems, because such systems require, for practical implementation, a set of accounting regulations and procedures to define and calculate "profits." Administrative burdens associated with industry compliance and government monitoring of a profit share system could offset its benefits, and thus are important design considerations.

To summarize, a review of the OCSLA's legislative history shows clearly that (a) while the Amendments authorize the use of many alternative bidding systems, Congress is especially interested in developing and using profit share leasing systems, but (b) the design and selection of individual profit share systems must be consistent with Congress's stated policy considerations. Those considerations most directly influenced by the use of particular leasing systems are restated, above, as guidelines for the design of a profit share system. They will be interpreted, in later sections, and translated into economic criteria that allow one to measure and compare the relative merits of different leasing systems.

The next section presents a brief discussion of economic concepts and terms required to discuss leasing systems. This is followed by a general review of previous research on leasing systems, which identifies the basic profit share systems that warrant detailed examination according to the economic design criteria just identified.

Leasing Economics (In Brief)

Federal OCS leases transfer to private parties a right to exploit oil and gas resources. These rights have a value. In economic terms, the value of a lease -- the economic rent -- is the difference between the value of production from a lease and the associated resource extraction costs.

Assuming competitive market conditions, the equating of price and long-run marginal costs determines the total volume of production available from an expected resource deposit. Infra-marginal units of production produce the economic rent, i.e., they produce a positive difference between price and cost until the marginal unit is produced at exactly zero economic rent. Discounting the sum of economic rents earned in each time period, which is to say the net present value, determines ex ante total economic rent attributable to a lease, and represents lease value.

At bid evaluation time, since everything is prospective, the potential bidder must consider all future costs associated with resource exploitation as being marginal costs. These long-run marginal costs include both operating costs plus all costs of lease exploration and development. Also, the long-run marginal costs include required opportunity costs of capital and any risk premiums required to engage in OCS activity. These are all real resource costs in the sense that they compensate for goods and services consumed in the lease exploitation process, and for the use of capital.

Thus, economic rent is net of all long-run costs, which by definition include (adequate) provisions for return on capital investment that is consistent with risks of offshore activity vis-a-vis alternative investment opportunities. Economic rent represents the amount that government should capture as the social value of the resource.

Two concepts should be emphasized at this point. Economic rents are not actually earned until there is production from a lease. Consequently, at the time of a lease sale, any value attributed to a lease is the discounted sum of these expected future economic rents.

This suggests there are two basic opportunities for the government to capture the economic rent. The first is at lease sale time. Transfer, at this time, would be in the

form of cash bonuses paid for lease acquisition, and by the reasoning just presented, the amount of the cash bonus is closely related to the total expected economic rent. The second opportunity is for the government to receive a portion of the economic rent as it is earned in each production period. This is accomplished through the mechanism of royalty or profit share type payments. Recognize that these later transfers are contingent on the lease becoming productive. Hence, they are referred to as contingency payments.

When the mechanism of contingency payments is employed to transfer economic rent to the government, these transfer payments appear to the potential bidder as an additional cost that reduces the economic rent he can retain in each production period. The remaining value of the lease at bid evaluation time becomes the former total expected economic rent less the discounted sum of these transfer payments. Consequently, the higher the contingency payments (i.e., higher royalty or profit share rates and payments), the lower the net present value at bid evaluation time, and the lower the cash bonus that a potential bidder is willing to offer to acquire the lease.

For completeness, we must mention two other forms of transfer payments to the government. The first, a very important element of any ex ante lease analysis, is Federal and state taxes: income taxes, severance taxes, property

taxes, etc. These are not directly affected by the leasing process although, as will be discussed subsequently, they have dramatic effects on producer behavior. The second transfer payment is an annual fixed rental fee paid each year the lease is active. However, rental fees are nominal in comparison with other transfer payments.

All these transfer payments -- cash bonuses, contingency payments, rental fees, and taxes -- operate to divert economic rent from the lessee/producer to the government. Assuming competitive market conditions, a potential bidder should be willing to increase his cash bonus bid to an amount where the sum of all transfer payment exhausts, ex ante, the economic rents associated with lease development rights. To go beyond this limit means bidding away normal profits and returns on capital.

Recognize, however, that given the true state of nature, i.e., the presence or absence of oil or gas deposits, all ex ante bids are either too high or too low. All initial cash bonus payments are made at the risk of complete loss, a result of no resource being present. Putting most of the emphasis on cash bonus payments places most of the resource risk on the lessee. But, the resulting low contingency payment provisions prevent the government from participating in "larger than expected" economic rents coming from large

deposits. These are typical of the problems identified with the traditional cash bonus bid, low fixed royalty leasing systems.

Previous Research

Profit share leasing has been examined by many researchers as an alternative to the traditional cash bonus bid-fixed royalty leasing system.¹² One motive is to improve the level of competition for OCS leases. Generally, when one accepts the premise that private sector bidders are risk averse,¹³ reducing the magnitude of cash bonuses initially paid for leases is considered a necessary condition for increasing the number of competitors in the bidding

¹²This section is not an exhaustive survey of research on profit share leasing. Rather it highlights important developments and conclusions of previous research.

¹³Leland summarizes the type behavior one expects from risk averse firms: (a) they tend to explore less, (b) they tend to extract discovered resources too rapidly (due to price uncertainty), and (c) they tend to bid less for leases. Hayne E. Leland, "Cash Bonus Bidding for Mineral Resources: Comment," in Michael Crommeling and Andrew R. Thompson, eds., Mineral Leasing as an Instrument of Public Policy, (Vancouver: University of British Columbia Press, 1977), p. 57-8.

process.¹⁴ Arguments supporting this compare (a) the magnitude of cash bonuses required to acquire attractive leases with (b) the financial size of bidding firms, and conclude that "smaller" firms, vis-a-vis "larger firms," have comparatively less ability to financially absorb a complete loss of the cash bonus. "Smaller" firms are inherently placed at a disadvantage in the bidding process. Such firms either do not enter bids or must restrict their bidding participation.

With more firms able to compete effectively in the bidding process, one can expect a greater diversification of OCS reserve ownership. Further, more bidding competitors provides greater assurance that the lease auction process will produce a winning bid that represents "fair market value," resulting in the Government obtaining a fair price for this public property. This reasoning is accepted by the Congress, as evidenced by the following excerpt from the Senate Report on the Amendments:

¹⁴This point is stressed in research developed for Congressional debate on the use of alternative bidding systems: "The purpose of reducing the cash bonus is to encourage smaller producers to participate in OCS development." Library of Congress, Congressional Research Service, "Effects of Offshore Oil and Natural Gas Development on the Coastal Zone," study prepared for the Ad Hoc Select Committee on Outer Continental Shelf, U.S. House Representatives, 94th Cong., 2nd sess., (Washington, DC: Government Printing Office, 1976), p. 101.

The basic thrust of all these new [leasing] options is to reduce the reliance on large front-end cash bonuses as the means of obtaining a fair price for the public's property. The committee wants to authorize lease allocation systems that would encourage the widest possible participation in competitive lease sales consistent with receipt by the public of fair market value for its resources. The committee believes that net profits share and other arrangements can be effective in shifting Government revenue away from initial bonuses and into deferred payments made out of a leaseholder's profits based on actual production of oil and gas.¹⁵

Using contingency payments as the primary mechanism for transferring economic rents to the government is an important method of sharing with industry the risks of OCS exploration and development. Cash bonuses are reduced by increasing the size of contingency payments. Since this reduces the amounts at risk from the outset, there results a higher degree of risk sharing with industry. This is a particularly

¹⁵Senate Report, p. 73.

attractive feature of profit share leasing.¹⁶

Deemphasizing initial cash bonus payments contributes in another important way to ensuring that the Government receives fair value for public resources. Comparisons of actual bids made for leases with expected values of those leases often indicate that actual bids represent a fraction of the lease's risked, discounted net present economic value. In very simplistic terms, this implies that potential bidders incorporate into their bid evaluation analysis all the uncertainty factors they feel are associated with geological characteristics of the lease; the costs of exploration development, and production; and the general economic environment. Then bidders may discount the resulting residual economic value a second time to arrive at the bid entered at the lease sale. This "second discounting" reflects the risk averse nature of bidders, i.e., their

¹⁶"One proposal does stand out, however, as having extremely desirable features. This is the profit sharing contract. Profit sharing does transfer risk from a firm to the government, and furthermore, if the profit base is properly defined, it will not destroy exploration, development, or production decisions." Leland, "Comments," p. 59. Also, "For a given level of expected bonus bids, a profit sharing plan will share risk more effectively than any other scheme. This has the desirable effect of lowering front-end costs, increasing competition, and increasing expected government revenues. Note that profit sharing not only shared discovery risks but also market price risks and production cost uncertainties." Hayne E. Leland, Richard B. Norgaard, Scott R. Pearson, "An Economic Analysis of Alternative Outer Continental Shelf Petroleum Leasing Policies," prepared for the Office of Energy R&D Policy, National Science Foundation (mimeo, Washington, DC: 1974), p. 28.

inherent unwillingness to accept risk beyond certain levels and their general uncertainty with the evaluation process itself. It can result in reduced bid levels and a proportionate loss of Government revenue from cash bonuses.

Thus, reducing cash bonuses and emphasizing royalty and profit share payments is an efficient way to ensure the Government realizes fair return for the resource. Bidders still stand to lose their cash bonus bids and they will continue to discount bids. But the discounted portion becomes smaller as the bonus bids become smaller, resulting in less absolute economic loss to the Government. However, the Government receives higher contingency payments throughout the life of the lease, provided the lease is productive. These contingency payments are not subject to discounting because there is no uncertainty once a lease becomes productive. Further, the Government has greater opportunity to share in the benefits of resource discoveries larger than originally anticipated.

Since contingency payments take the form of either royalty or profit share payments, increasing the amount of either results in a reduction of residual economic value to the lessee, and hence a reduction of cash bonuses bid at the lease sale. We have mentioned that contingency payments are increased by increasing either the royalty or profit share

rate stipulated in the lease. However, increases in royalty rates result in several well known perverse effects on the pattern of lease development and production. First, with higher royalty rate leases, resource discoveries must be larger to support commercial development and production. Royalty contributions to the Government represent an additional cost to the producer. Larger "pool" sizes must be found in order for cost economies of scale to provide returns to the developer/producer. This is to say that higher royalty rates tend to cause the smaller resource discoveries -- the "marginal" fields -- to go undeveloped. Consequently, while cash bonuses are reduced by adopting a higher royalty rate leasing system, the equally important objective of promoting efficient resource recovery is not furthered.

The second undesirable result of increasing royalty rates occurs when design decisions on how to develop a lease are made. Economists previously believed that higher royalty rates caused early or "premature" termination of production. However, this conclusion results from a static analysis of lease production. It ignored the dynamic relationship between the initial sizing of production capacity and the time period during which a lease is produced. A developer can decide to install a smaller production facility and operate for a longer time, or he can install a larger

production facility and operate for a shorter time. The best decision, from the developer's point of view, is that which maximizes the present value of after-tax net profits. Tyner¹⁷ has analyzed many different forms of royalty leasing systems, using the dynamic framework just discussed, and makes the important contribution that higher royalty rates do not necessarily force an early termination of production. Rather, they prolong the production life of a lease, a result of "optimal" producer decisions to install smaller initial production capacities and operate for additional production periods. The same amount of resource will be produced but over a longer time frame. However, this constitutes less than efficient development of the resource when compared to development decisions and production production profiles expected under the traditional cash bonus bid-1/6 royalty leasing system.

The "prolongation of production" effect caused by higher fixed-rate royalty leasing systems (i.e., adopting fixed royalty rate of 40 percent) can be mitigated to a certain extent by the use of variable-rate royalty systems. The semi-log variable royalty system is one of the more

¹⁷Wallace E. Tyner, "Evaluation of Royalty Provisions for OCS Leasing," prepared for the Leasing Policy Development Office, U.S. Department of Energy (Washington, DC: 1978).

efficient variable-royalty systems and versions of it were used in several OCS sales held in 1978. The semi-log variable royalty system reduces cash bonuses without causing severe production prolongation problems, although production continues for several addition years. Tyner discusses the semi-log variable royalty system in detail and compares it with many other variations of royalty leasing. In a later section of this paper, the characteristics of semi-log variable royalty systems are discussed and compared with profit share systems.

The use of profit share systems constitutes the second basic alternative for reducing the magnitude of cash bonuses (the first alternative being the use of higher or variable royalty provisions). Although not yet tried by the Federal government, profit share leasing has been used for many years by Great Britain and Norway in their development of the North Sea. In the U.S., several state and local governments have used forms of profit share systems to lease development rights for oil and gas (e.g., City of Long Beach, California in early 1960's) and geothermal resources (e.g., State of California in early 1970's). While actual experience with profit share leasing in this country is limited, theoretical aspects of profit share leasing have been examined extensively and some have already been mentioned.

One of the more comprehensive examinations of alternative leasing systems was conducted by the Federal Trade Commission in 1975.¹⁸ Researchers involved with the FTC work concluded that:

1. Profit share systems permit a more equitable sharing of risk than is available under other systems.¹⁹

2. Shifting more of the risk to the government reduces the undesirable effects of risk aversion (i.e., avoids "double discounting" of cash bonus bids, expands the opportunities for firms to bid, and thus improves the competitive atmosphere for OCS resources).²⁰

3. When properly administered, profit share leasing comes closest to capturing the fair market value of leases.²¹

¹⁸Federal Trade Commission, Bureau of Competition, Bureau of Economics, "Report to the Federal Trade Commission on Federal Energy Land Policy: Efficiency, Revenue, and Competition," (Washington, DC: October, 1975).

¹⁹"Risks are shared to a greater extent under a profit system than under any other lease allocation system... Such a system shares not only discovery and market price risks, but also cost risks." Ibid., p. 283-4.

²⁰Ibid., p. 284.

²¹Ibid., p. 295.

This FTC report concluded that profit share leasing systems could be "more conducive to the attainment of energy self sufficiency than any other seriously considered lease allocation system."²² Counter balancing this optimism, however, is the FTC's concern that, in practical terms, it will be difficult to define and measure profits.²³

The FTC study concentrated primarily on comparing, in theoretical terms, leasing systems on the basis of a static, one-period economic approach. Kalter, et al., independently extended this research into a dynamic, multi-period analysis by developing a computer simulation model of firm behavior under various leasing policies.²⁴ An expanded description of the Kalter model is presented later in this paper. However, it is important to realize that through the use of Monte Carlo simulation techniques, the discounted cash flow procedures in the Kalter model allow the policy analyst to

²²Ibid., p. 295.

²³"...one disadvantage of the profit-sharing system derives from the difficulty of measuring profits. The allocation of overhead and common costs is often arbitrary. The lessee's accountant would have an incentive to shift expense items from other areas to lease operations." Ibid., p. 287.

²⁴Robert J. Kalter, Wallace E. Tyner, and Daniel W. Hughes, Alternative Energy Leasing Strategies and Schedules for the Outer Continental Shelf, A. R. Res. 75-33 (Ithaca, NY: Cornell University, Dept. of Agricultural Economics, 1975).

consider all uncertainties inherent in exploring, developing, and producing from the OCS. In particular, the model allows one to understand the effect that leasing policy alternatives will have on a firm's prospective formulation of cash bonus bids.

The Kalter study was also one of the first to distinguish between different types of profit share leasing systems. Using the model discussed above, the Kalter study concluded that four profit share systems (annuity and fixed capital recovery systems with either fixed or variable profit share rates) and the variable rate royalty system based on value are all significantly better than the current cash bonus system.²⁵ The variable rate royalty system has already been mentioned; it will be compared with these profit share systems in a later section of this analysis.

Rose has suggested a third type of profit share leasing system -- the investment account system -- that is similar in many respects to the fixed capital recovery and the annuity capital recovery systems.²⁶ The investment account

²⁵Ibid., p. 111.

²⁶Marshall Rose, "The Leasing of OCS Tracts Using a Profit-Sharing System," Department of the Interior Memorandum (mimeo; Washington, DC: 1977).

system does not differentiate between exploration/development (pre-production) expenses and production expenses. This feature adds an element of administrative simplicity that is desirable if it does not cause anomalous producer behavior. The investment account system will be analyzed and compared with the profit share systems already discussed.

This discussion has concentrated exclusively on cash bonus bid forms of profit sharing. The alternative, establishing a nominal cash bonus and awarding leases to the highest profit share rate bidder, is also a possibility. However, it is believed that profit share rate bidding versions of profit share leasing will exhibit the same problems experienced with royalty bidding, namely:

- o A strong temptation to over bid the profit share rate. Because the low cash bonus reduces the risk of a complete loss, and there is no penalty per se for over bidding the profit share rate, bidders are tempted to bid excessively high rates to acquire a lease.
- o Speculative bidding. Since there is little cash bonus required to acquire a lease, bidders enter the competition hoping to acquire and then resell later. The risk of not reselling is no greater than the risk of not finding resource deposits.

- o Inefficient resource development. Simulation analyses show that royalty rate bidding systems result in (a) dramatically reduced levels of resource development for all expected reserve sizes, (b) the minimum size field discovery required to support commercial production is larger, and (c) production profiles are longer, indicating lower initial installed capacity.²⁷ Similar production inefficiencies are expected to result from profit share bidding.

Faced with these potentially adverse effects of a profit share rate bidding sale, initial experimentation with bonus bid profit sharing seems prudent, at least until the more mechanical problems of profit share accounting, auditing, and general administration have been resolved.

To summarize this section, previous research has identified the benefits that can result from the adoption of profit share leasing systems. Recent studies have looked at different types of profit share leasing systems and identified three -- the fixed capital recovery system, the investment account system, and the annuity capital recovery system --

²⁷See, for example, S. W. Edwards and A. A. Prato, "Regulatory Analysis: Outer Continental Shelf Bidding Systems Regulations," Department of Energy (mimeo; Washington, D.C.: Leasing Policy Development Office, 1978)

that, generically, achieve these benefits to a higher degree than other profit share system variations. The next section develops the structure of profit share accounting needed to define and calculate actual profit share payments. Then, using this structure, the three systems are analyzed in detail and evaluated according to the economic criteria previously discussed.

Analysis of Profit Share Systems

The material presented to this point is largely a synthesis of research and general discussions on profit share leasing. It provides the necessary foundation for the analysis that follows. The remainder of this study describes an economic analysis designed (1) to provide a basis for selecting, for the first implementation of profit share leasing, one of the three cash bonus bid, fixed rate profit share systems identified previously, and (2) for comparing, in a cost benefit sense, the advantages of using the selected profit share system with other alternative leasing systems.

Because profit share systems incorporate a definition of cost as well as revenue into the structure of the leasing system, they differ from all systems previously used for leasing Federal lands in the United States. Royalty systems need only be concerned with the gross value of production

attributable to a lease, whereas profit share systems are based on some measure of profit -- revenue less cost -- attributable to production from a lease. Hence, an analysis of individual profit share systems is relevant only after the structure of cost and revenue accounts is established.

The Exploration/Development/Production Cycle

The system of accounts needed to implement the profit share leasing systems examined in this analysis is closely related to the exploratory/development/production cycle for offshore leases. A brief description of this cycle at this point will make the discussion of individual profit share accounts that follows more meaningful.

Prior to each lease sale, potential bidders evaluate individual tracts to appraise their resource potential and value. Bids for individual tracts are determined and a corporate bidding strategy developed.

The lease sale itself, i.e., the administrative process of receiving, opening, and announcing bids, is conducted by the Bureau of Land Management (BLM) district office responsible for the area of the sale. All bids are delivered to the BLM office on the morning of the sale. After cataloging, bids are opened and publicly announced. A firm submitting the highest bid is, in most cases, awarded the lease within

thirty to sixty days of the sale,²⁸ providing the bidder is qualified."²⁹

Following issuance of a lease, the lessee begins a program of exploration activities that generally include detailed geophysical surveys and the drilling of exploratory wells. A lease is valid for a period of five years during which time the lessee must establish that commercially producible quantities of hydrocarbons (oil and gas) exist on the lease, or, that because of extenuating circumstances (severe climatic conditions, unusually deep water, etc.), the lease should be

²⁸Prior to 1978, BLM regulations required that leases be awarded (or rejected) within 30 days of the lease sale. These regulations were changed to allow 60 days between the sale and the last day for accepting a lease, primarily to provide time for conducting and evaluating a post-sale competitive review (see footnote 24).

²⁹There are several administrative requirements that must be satisfied before a bidder is considered "qualified." For example, the bidder must establish a performance bond in accordance with BLM regulations. Also, if the bid is submitted by a joint venture, the venture must certify that no two members individually control production in excess of 1.6 million barrels per day. See §105(c), Energy Policy and Conservation Act, 42 U.S.C. 6201 et. seq. Recent amendments to the OCSLA have added another procedural test -- the post-sale competitive review -- that could result in a high (and otherwise "qualified") bidder being denied a lease. This post-sale analysis of competition may be conducted by the Attorney General, in consultation with the Federal Trade Commission, and is designed to determine whether the issuance of leases will maintain or create situations inconsistent with the antitrust laws. See §8(c), OCSLA.

extended. In the absence of such circumstances, a lease expires after five years.

If a commercially producible hydrocarbon deposit is discovered, the lessor begins a sequence of development activities that generally include (1) drilling additional exploratory wells to delineate the extent of a reservoir, (2) designing platforms and production equipment, (3) fabricating and installing platforms and production equipment, (4) drilling development (production) wells from the platforms, and (5) testing production facilities prior to establishing design volumes of production. The combined exploration and development period is referred to as the "pre-production" period, which ends on the first day that commercial quantities of production are established from the lease. The "production" period begins on the day of first production and ends on the last day of production.

Profit Share System of Accounts

Profit share leasing is, by definition, based on some measure of profits. Generally speaking, profits are the difference between revenues and costs. But which revenues, which costs? It is reasonably easy to develop procedures that determine the volume and hence the value of production (revenues) attributable to lease operations. It is consider-

ably more difficult to develop procedures that unambiguously determine the magnitude of expenses (costs) incurred because of lease operations. Also, "profit" is inherently a time dependent concept; implementation of a profit sharing system requires one to specify time periods for measuring revenues and costs, and calculating profits. The alternative -- waiting until all production ceases before tallying revenues and costs, and calculating final profits -- is unacceptable.

Thus, profit share leasing requires a set of procedures -- an accounting system -- to deal with these problems in practical terms. The accounting procedures focus primarily on definitions of the costs allowable as offsets to lease revenue. These definitions contain attribution rules that determine whether a cost was incurred as a result of developing or operating a profit share lease (and should thus offset some amount of revenue from the lease). Once a cost item has been attributed to profit share operations, there may be difficulty determining the amount of the cost that is allowable, particularly if it was incurred jointly with costs for other non-allowable activities. Thus, in addition to cost definitions and attribution rules, accounting procedures must include allocation rules that break joint costs into the allowable profit share component and the disallowed non-profit share component.

Previous studies provide little guidance on the sensitivity of profit share systems to different types of cost.

In fact, previous studies have not dealt with problems and burdens of implementation other than to suggest that the administration of profit share leasing could be difficult. They have tacitly assumed that all costs incurred in the course of exploring, developing, producing, etc. a profit share lease (from direct tract expenses to the most indirect elements of corporate overhead) are included within the framework of the profit share system.

However, certain costs are more difficult to define and measure than others. For example, direct purchases of equipment and direct labor on production platforms are costs that can be easily measured and attributed to profit share operations, where as elements of corporate overhead are very difficult to attribute to particular profit share leases, much less measure. Moreover, as will be shown in several instances throughout this study, certain costs are more instrumental than others in influencing firms to behave in the manner that promotes policy objectives. Depending on how critical a cost element is in influencing desired producer behavior,³⁰ it may or may not be necessary from an

³⁰ The terminology "desired producer behavior" and "desired pattern of behavior" is used frequently to denote firm decisions that affect (a) whether or not to develop a marginal discovery, (b) the initial installed capacity of production facilities, (c) production rates, and (d) termination of production. What is "desired" is that firms (a) develop marginal field discoveries, (b) install larger production facilities, (c) have higher production rates over shorter periods of time (short of production rates so high that resource conservation becomes a problem), and (d) do not terminate production until the maximum amount of resource is recovered.

economic standpoint, to include the cost item in actual profit share calculations. Generally speaking, the size of the production facility initially installed (initial installed capacity) is largely determined by the cost of lease development and the speed at which this cost can be recovered. Variable operating costs will determine the actual production rate, as well as decisions to terminate production once facilities are in place. Therefore, providing adequate recognition of development expenses, an adequate mechanism for the return of capital, and accurate measurement and recognition of variable operating costs are the most critical features of a profit share accounting system.³¹

³¹These are primarily economic criteria that determine whether there will be timely and efficient exploitation of resources discovered. Emphasizing these cost elements in deference to other elements of cost will have "little impact on the Government's ability to capture fair market values providing the following conditions hold:

- (1) There is a strict formula for computing net profits. The formula need not be correct, but must be consistent;
- (2) No firm has a significant advantage in being able to shift book profits between profit-sharing and other operations; and (3) There is effective competition for leases.

... As long as the factors which overstate or understate net profits are generally known, firms will adjust their bids accordingly. Competitive bids are not based on accounting profits, but on firm's real profit expectations." Federal Trade Commission, "Federal Energy Land Policy...", p.288.

Unfortunately, as accounting systems become more sophisticated in their ability to recognize and classify costs, the procedures and regulations that comprise the system become correspondingly detailed. Increased complexity adds opportunities for disagreement as to the interpretation of regulations, allocation of joint costs, etc. Designers of the accounting system must weigh these tradeoffs -- added complexity to increase accuracy and scope of cost definition and allocation, versus administrative simplicity. The accounting system, when implemented, must allow enough of the true economic costs of conducting offshore operations while not becoming overly dependent on government auditing and supervision to ensure compliance, misinterpretations, misallocation of cost items, etc., ... even to prevent unjustified shifting of expenses to profit share accounts from other nonprofit share activities.

Thus, the guidelines for developing the accounting system appear to be: emphasize elements of cost that influence, in the manner previously discussed, optimum firm behavior, but be very conscious of whether the inclusion of additional cost items will require excessive regulatory definition, which would lead to compliance and auditing difficulties. Of course, these guidelines pertain more to the development of

the accounting system itself,³² not to the economic analysis of individual profit sharing systems. To clarify, the accounting system specifies which cost elements are allowable and how they are to be combined to form aggregate cost balances. The same is true for production revenues and other credits. The profit share systems differ in the way these aggregate balances are manipulated to determine "profits". However, the economic analysis of each system assumes the accounting system is operating "perfectly," i.e., is properly identifying, measuring, and aggregating costs. The analysis works with aggregate costs (which will differ in magnitude according to water depths, reserve sizes, OCS region, etc.) to determine how the calculation that characterizes each profit share system influences producer behavior.

³²One could (reasonably) suggest that, because there has developed over the years several sophisticated accounting systems for determining and reporting "profits", the Federal Government might adopt an existing accounting system instead of designing another. For example, the Internal Revenue Service's definition of taxable income could be adopted, or perhaps net profits as determined by standard financial accounting procedures. However, reliance on an "outside" accounting system ("outside" in the sense that changes to the system would be made by parties unaware of, or unconcerned with the impact such changes could have on the Federal leasing program) carries the risk that rules or interpretations could change and thus radically alter the behavior of lessee's dependent on those definitions.

With this background, we can proceed to define the basic profit share accounts needed to implement (and analyze) the three profit share systems of interest. Actually, we need only two accounts. The first account -- the pre-production period account -- accumulates all expenses incurred during the pre-production period. Every allowable expense, regardless of its nature, (i.e., current operating expense, intangible drilling expenses, equipment purchases, etc.), incurred during the exploration and development period is debited to the pre-production account. These will include: all exploration cost (surveys, drilling, etc.) incurred after issuance of a lease, all development costs (design work, fabrication, installation of platforms and facilities, etc.), and lease rental fees. Only costs directly related to lease operations are allowed. The original cash bonus paid for a lease is specifically not allowed.³³ The pre-production period

³³Excluding as an allowable expense the cash bonus paid for lease acquisition lowers the net present value of the lease, hence lowers the cash bonus bid. This is a basic objective motivating the switch to profit share leasing. Further, with a lower cash bonus, there is less incentive for firms to abandon marginal resource discoveries. This incentive exists because Federal tax laws allow unexpensed lease acquisition and exploration costs to be "written off" when a lease is relinquished, thus providing a partial recovery of these otherwise "sunk" costs. When the amount recoverable through the tax write-off process exceeds the expected present value available from lease development, the lessee will generally opt to abandon the lease.

ends when commercial production begins - the "day of first production".³⁴

Similarly, all expenses incurred during the production period are accumulated in the "production" account. Again, there is no discrimination according to the nature of the expense, i.e., whether it is a current operating expense or a capital expense.³⁵ No debit is made to the production account for depreciation, amortization, etc., of capital investments made during the pre-production period. Provisions for capital recovery are specifically provided through the capital recovery mechanism of each leasing system, to be discussed next.

Allowance for Capital Recovery

As has been noted, previous economic analyses of profit

³⁴The importance of establishing the day of first production cannot be skipped over lightly. What qualifies as the day of first production will be a matter of definition in the accounting regulations. However, the analysis of each system presented later in this study will consider the sensitivity of each system to adjustments in the "day of first production." This will indicate whether particular profit share systems provide economic incentives to artificially manipulate this date, i.e., "play games" with this date to include more (or less) expense in the pre-production account.

³⁵Interest to finance capital purchases is not an allowable expense for either the development or the production accounts.

share leasing were (basically) oblivious to practical consideration of cost measurement. These studies started with the premise that "development" costs can be identified and distinguished from "production" costs. This segregation is important because aggregate "development" costs form the basis for the capital recovery mechanism that each system uses to (a) provide a return of lease development costs, and (b) compensate for the use of capital invested in lease development. These mechanisms are completely different from the depreciation or amortization procedures used for financial or tax accounting, although, in theoretical terms, the purpose each serves is the same -- each provides a mechanism for capital recovery.

Moreover, economic studies of profit share leasing generally assume that all lease development costs have been incurred by the time that commercial quantities of production are established. Hence, the distinction between the pre-production and the production expense account. The definition and use of these accounts in the manner described emulates the assumptions used in economic analyses of profit sharing.

The three profit share systems that will be examined use the balance in the pre-production account (i.e., accumulated allowable exploration and development costs) as the proxy for

total lease capital investment. The mechanism for returning this investment to the lessee is described below for each system:

Fixed Capital Recovery System: Expenses are debited to the pre-production account as they are incurred during the pre-production period. When the pre-production period ends, the balance in this account is multiplied by a capital recovery factor. The product of this calculation is the total allowance for capital recovery (TACR). The capital recovery factor is typically a number between 1.0 and 2.0, although it can be any number. As will be brought out in later discussion, the capital recovery factor actually selected for a particular lease sale is that needed to provide returns to a lessee commensurate with the risks of OCS activity, given (1) anticipated exploration and development costs, and (2) time delays from the date of lease acquisition to production. Procedures for selecting this factor are demonstrated in the economic analysis of this system, which is presented later. An allowance for capital recovery can be taken in any reporting period (procedures for using ACR and calculating net profits are discussed in the next section) until the sum of ACR's used in successive reporting periods equals the total ACR available (TACR).

Annuity Capital Recovery System: Expenses are debited to the pre-production account as they are incurred during the pre-production period. When the pre-production period ends, the balance in this account is annuitized to determine the ACR available to the lessee each reporting period. Parameters needed to calculate the annuity³⁶ -- interest rate per reporting period and the number of reporting periods -- are terms stipulated in the lease (and would be known prior to a lease sale). For example, if the lease stipulates that the pre-production account balance will be annuitized over "n" reporting periods, the annuity formula determines the equal amounts that can be used as ACR for the "n" successive reporting periods. The maximum ACR that can be used in any one reporting period is the sum of (a) the ACR available

³⁶The annuity formula used for this system is the same used to calculate equal payments for amortizing home mortgages. The formula calculates the amount due (or available) each reporting period so that the resulting stream of payments provides an internal rate of return equal to the interest rate per period, and the final payment completely amortizes the original balance in the account. If the lease stipulates that the interest rate is "i" per reporting period for "n" periods, then:

$$ACR = P / \frac{1 - (1+i)^{-n}}{i}$$

where P is the original balance in the pre-production period account. *

for the period itself, and (b) any unused ACR from previous periods. Note that this system differs from the fixed capital recovery system in that the annuity system limits ACR available in any period to the amount calculated by the annuity formula (plus previously unused ACR), while the fixed system permits up to the full TACR to be used in any one period.

Investment Account System: The investment account system establishes accounting periods during the pre-production period (as well as reporting periods during the production period). Expenses are debited to the pre-production account when incurred. However, the pre-production account is totaled at the end of each accounting period and the balance plus an interest charge (debit) become the opening balance for the next accounting period. The interest charge is the pre-production account balance multiplied by an interest rate that is stipulated in the lease. At the end of the pre-production period, the sum of all expenses and interest charges becomes the TACR. This is available as an ACR in any period, as with the fixed capital recovery system. However, unlike the fixed system, any unused TACR is forwarded to the next period with an additional interest charge (increasing the TACR available), which is calculated by multiplying the unused TACR by the interest rate.

Basic Profit Share Calculations

The profit share systems examined in this paper use a common series of calculations to determine net lease profits -- the "profit share base" -- and, consequently, the profit share payment owed to the government. The systems differ primarily in the manner that an allowance for capital recovery is calculated. This section describes the basic series of calculations; the procedures for determining the allowance for capital recovery are explained in the sections describing each profit share system, which follow.

Net profits ascribed to a lease are determined for each calendar month (the "reporting period"³⁷) of the production period, according to the following procedures:

1. Gross lease revenue. This is the value of all production realized from a lease during the reporting period. Pricing rules incorporated in the profit share accounting regulations

³⁷The selection of an accounting period is a compromise between administrative burden and government's desire for quick receipt of profit share payments. Companies are accustomed to a monthly accounting cycle for many activities. Moreover, monthly reporting is the current practice under royalty leasing. A monthly reporting requirement seems reasonable for profit share leasing, although the economic benefits of profit share leasing are unaltered by the selection of any period.

will guide the valuation of production. Gross lease revenue is the same figure (calculated on a monthly basis) on which royalty payments for royalty leasing systems would be based. For accounting purposes, gross lease revenue is a credit to the production account.

2. Net lease revenue. Expenses incurred during the production period are debited to the production account. At the end of each reporting period, the balance in the production account represents net lease revenue, i.e., the difference between gross lease revenue and expenses. A negative balance is carried forward to the next reporting period.

3. Profit Share Base. The profit share base is determined by subtracting any allowance for capital recovery (ACR) available during the current reporting period from net lease revenue. Any "unused" ACR is carried forward to the next reporting period. A carry forward would occur if either (1) there were already negative net lease revenues, in which case the entire ACR for the period is carried over, or (2) if net lease revenue was less than ACR.

4. Profit Share Payment. The profit share payment is the amount owned to the government for the current reporting

period. This is determined by multiplying the profit share rate by the profit share base. The profit share rate is stipulated in a profit share lease as a lease term and condition, and is fixed for the duration of a lease.

Carry forwards of unused production expenses or ACR is specifically provided by these profit share systems. The investment account system forwards unused production expenses and TACR with an additional interest charge. The other two systems only carry forward the unused balances.

Note, however, there is no provision for applying expenses incurred on one profit share lease against revenue generated from another source (other lease operations, other corporate activities, etc.).³⁸ Several mechanisms for sharing losses have been proposed. However, even the most simple loss sharing mechanism -- allowing the losses from one profit share lease to offset revenues from another profit share lease held by the same lessee -- raises problems that severely complicate administration of the overall profit sharing system. While not ruled out, extensions such as

³⁸However, the use of a profit share leasing system in no way alters standard tax accounting procedures. Thus, to the extent allowed by Federal tax laws, intangible drilling costs and other currently deductible expenses can reduce taxable income from other sources. This is another form of capital recovery which makes a profit share lease more attractive than is evident from an analysis of cash flows generated strictly by the lease itself. All simulations of leasing systems in this study assume that sufficient revenue from other sources is available to utilize this tax advantage.

"loss offsetting" should be examined after the a basic system can be evaluated.

Simulation Analysis of Leasing Systems

The three profit share leasing systems were analyzed by simulating their performance with the GEN2 resource policy evaluation model.³⁹ Simulation is an analysis technique that permits, in this case, the bidding systems to be analyzed under a common set of conditions and assumptions. Hence, meaningful comparisons between systems are possible. The GEN2 model evaluates the economics of each leasing situation with a standard discounted cash flow procedure, and uses Monte Carlo simulation techniques to represent the uncertainty associated with variables (e.g., resource size, price,

³⁹For simplicity, this section refers only to "three profit share leasing systems;" namely, the fixed capital recovery system, the investment account system and the annuity capital recovery system (ACR). There are, however, many variations of each system. One variation of the FCR system is obtained by specifying a profit share rate (PSR) of 50 percent and a capital recovery factor (CRF) of 1.5. Changing the PSR to 60 percent, with the CRF at 1.5, denotes another FRC system variation. Many variations of each system have been simulated; the results are discussed in following sections.

etc.) most critical to the valuation process.⁴⁰

Table 1 presents the assumptions used for the simulation analysis of each system. To facilitate comparison between the results obtained for this profit share leasing analysis and previous analyses of royalty systems,⁴¹ the assumptions shown in Table 1 are the same used in that previous work. The primary purpose of the analysis is to determine relative performance characteristics of each system. Thus, while some may question the current accuracy of a particular assumption, e.g., \$14.00 per barrel oil instead of a higher price, the assumptions are being applied consistently to each system. The sensitivity of the results to several key input assumptions are tested as part of the analysis.

Several important features of the GEN2 model should be emphasized. First, given a set of values for the economic and geological variables in the model (i.e., one iteration),

⁴⁰For a complete description of GEN2 see Kalter, et al, Alternative Energy Leasing Strategies, and Robert J. Kalter and Wallace E. Tyner, A Simulation Model for Resource Policy Evaluation, revised version, No. 77-78 (Ithaca, NY: Cornell University, Department of Agriculture Economics, 1977).

⁴¹Tyner, "Evaluation of Royalty Provisions...".

Table 1

General Assumptions for Profit Share Leasing Systems Simulations

Geologic

Production decline rate, α	.12
Reserve distribution	lognormal
Dry hole risk, mean	.700
Dry hole risk, std. dev.	.103

Price related

Initial oil price, P_0	\$14.00
Initial gas price, GP_0	2.00
Mean of oil price change distribution, $RPIMM$	0.00
Std. dev. of oil price change distribution, $RPISTD$	0.04
Mean of gas price change distribution, $GPIIM$	0.00
Std. dev. of gas price change distribution, $GPISTD$	0.04

Tax related

Depreciation method, NDEPR	Sum of years digits
Depreciation lifetime, N	prod. lifetime
Percent investment salvageable, α	.10
Investment tax credit rate,	.10
Federal corporate tax rate, 0	.48

Time related

Minimum production time, $TMIN$	9 years
Minimum production time, $TMAX$	40 years
Length of flat production plus production build-up, $FLATP$	4 years
Development and exploration period, LAG	5 years
Exploration period, $LEXLOR$	2 years
Production build-up period, IBP	2 years
Production build-up factors, BPP	
year 1	.5
year 2	.8

Cost related

Working capital factor	.10
Triangular investment and operating cost contingency distributions*	
$CMIN$, $KMIN$	.25
$CMODE$, $KMODE$	.30
$CHAX$, $KMAX$	.40
Rate of change in unit operating cost, $THETA$	0.00
Rent per acre, $RENT$	\$3.00
No. of acres per tract, $ACRES$	5760.
Investment cost allocation during development, FD	
year 1	0.00
year 2	0.10
year 3	0.30
year 4	0.40
year 5	0.20
Percent investment each year that is tangible, TD	
year 1	0.00
year 2	0.70
year 3	0.70
year 4	0.80
year 5	0.80
Exploration cost allocation during exploration, FX	
year 1	E.40
year 2	0.60
Percent exploration cost each year that is tangible, TX	
year 1	E.50
year 2	0.80
Investment cost control (climatic region), $LCLM$	2
Initial operating cost/barrel	Mid-Atlantic 0.52
Cost per exploratory well (million \$)	\$5.68
Acquisition cost	\$100,000.00

Other factors

Discount rate	.10
No. of exploratory wells per 1000 acres, $WELLS$	.50
Bonus factor, $BFAC$	.75
No. of Monte Carlo iterations, $NCOOP$	100

*These values reflect a 30% adjustment to the costs in the model, which are in 1975 dollars. Costs are assumed to have increased 30 percent between 1975 and 1978. By subtracting .30 from these factors, one can obtain the actual contingency distributions in 1978 dollars. Hence $CMIN$ and $KMIN$ are -.50, $CMODE$ and $KMODE$ are 0.00, and $CHODE$ and $KMAX$ are 0.10.

the model solves for the value of initial installed capacity that maximizes the present value of production, given the existence of resources. The associated cost per unit of installed capacity is a non-linear function of expected reserve size.⁴² However, having established the cost per unit of installed capacity at the specific reserve size assumed for the iteration, the model assumes that the total cost of actual installed capacity is a linear relationship, i.e., no loss of efficiency for selecting a smaller versus a larger initial installed capacity.

Second, the model recognizes the time lags and engineering constraints that determine typical production profiles for each OCS region. These simulations assume that a minimum of five year (from lease acquisition) are required to establish production, and that the minimum production period is nine years. The model can select longer production periods, but minimum lease life for these simulations is fourteen years.

⁴²The model determines a per unit cost of installed capacity, C, with the relationship:

$$C = aR^b$$

where R is the expected reserve size, and a and b parameters unique to each cost region.

The cash bonus, 1/6 royalty system (CB-1/6) is used as a standard of comparison for all systems. Simulation results of the CB-1/6 system for various cost regions are shown in Appendix A.

Actual comparison among systems are made on the basis of four statistics. The first is the percentage of bonus reduction (PBR). This is the expected reduction in cash bonus when compared with the bonus expected under similar conditions for the CB-1/6 system:

$$\text{Percent Bonus Reduction} = 100 \left(1 - \frac{\text{CB(PS)}}{\text{CB(CB-1/6)}} \right)$$

where "CB(PS)" is the cash bonus of the particular profit share system and "CB(CB-1/6)" is the cash bonus under the cash bonus, 1/6 royalty system.

The second basis for comparing these systems is the percent of fields developed. The GEN2 model explicitly represents the development decision that must be made following the discovery of hydrocarbons on a lease. When a discovery is made, a lessee must decide whether there is greater value in (1) abandoning a lease to recover unexpected lease bonus and exploration costs (recovering them through the Federal income tax provisions that allow deductions

against other income) or (2) developing and producing a lease. This is a critical decision, particularly at lower reserve sizes. The percent fields developed shows the number of discoveries expected to be commercially producible for each original expectation of reserve size. A higher percentage of discoveries produced implies the system promotes commercial development of the smaller field discoveries. When compared to the CB-1/6 system, an increase in the percent fields discovered in each reserve category represents an improvement in economic incentives to develop marginal field discoveries -- one of Congress's original objectives for the use of alternative systems.

The third basis for comparing these leasing systems is the production life of the lease. Engineering constraints imposed on the model do not permit a lease production life of less than fourteen years -- five years for exploration and development, nine years for production. However, depending on economic incentives provided by each system, a production life of greater than fourteen years is possible at the sacrifice of reduced annual production. Ceterus paribus, a shorter rather than longer production life is desirable.

Note that the second and third measures of leasing system performance -- percent of fields developed and production life -- are directly related to the Congressional objective of promoting timely and efficient resource recovery. How-

ever, as will be shown in the analysis of each system, the objective of promoting efficient resource recovery is somewhat antithetic to the objective of reducing cash bonuses. The following assumption is made regarding the relative importance of these objectives. Since the United States is in the midst of an energy crisis, a crisis which is characterized primarily by a shortage of oil and natural gas production, it is assumed that the objective of reducing cash bonuses should not be promoted at the expense of sacrificing resource recovery. This translates into the following criteria. Only systems that achieve an expected level of resource recovery at least as good as the current CB-1/16 system should be considered candidates for implementation. Among the systems satisfying this criteria, the system that is most effective in reducing cash bonuses and improving expected government revenues (the comparison characteristic discussed next) will be considered "best".

The final basis of comparison is the present value of expected government revenue generated by each system. Government receipts for a lease consist of initial cash bonuses, taxes, and royalty or profit share payments received during the life of the lease. An increase in expected government receipts reflects an increase in the probability that fair market value will be realized for public resources. Again, this is one of Congress's primary objectives.

Fixed Capital Recovery (FCR) Systems:

Twelve different variations of the fixed capital recovery system (the "fixed") system were simulated for each of 15 different reserve sizes from 30 to 1000 million barrels. The costs used for these simulations are representative of costs experienced on middle-Atlantic OCS leases, which is characterized as a medium cost area. The results are shown in Appendix Tables B-1 through B-12. These can be compared with simulation results (shown in Appendix Table A-1) of the traditional CB-1/6 royalty system for the same range of reserve sizes and costs. Appendix B also contains tables showing simulations of the fixed system using Gulf of Mexico costs (which are generally lower than middle-Atlantic costs), and different assumptions regarding production profiles, timing of development costs, and production delays.

These simulations indicate the following characteristics of the fixed system. When the capital recovery factor is held constant, an increase in the profit share rate causes a decrease in ATNPV, resulting in an increase in the percentage bonus reduction. This is anticipated since holding the capital recovery factor constant allows no additional capital recovery (sheltering of net revenues), while increasing the profit share rate diverts greater proportions of net revenue

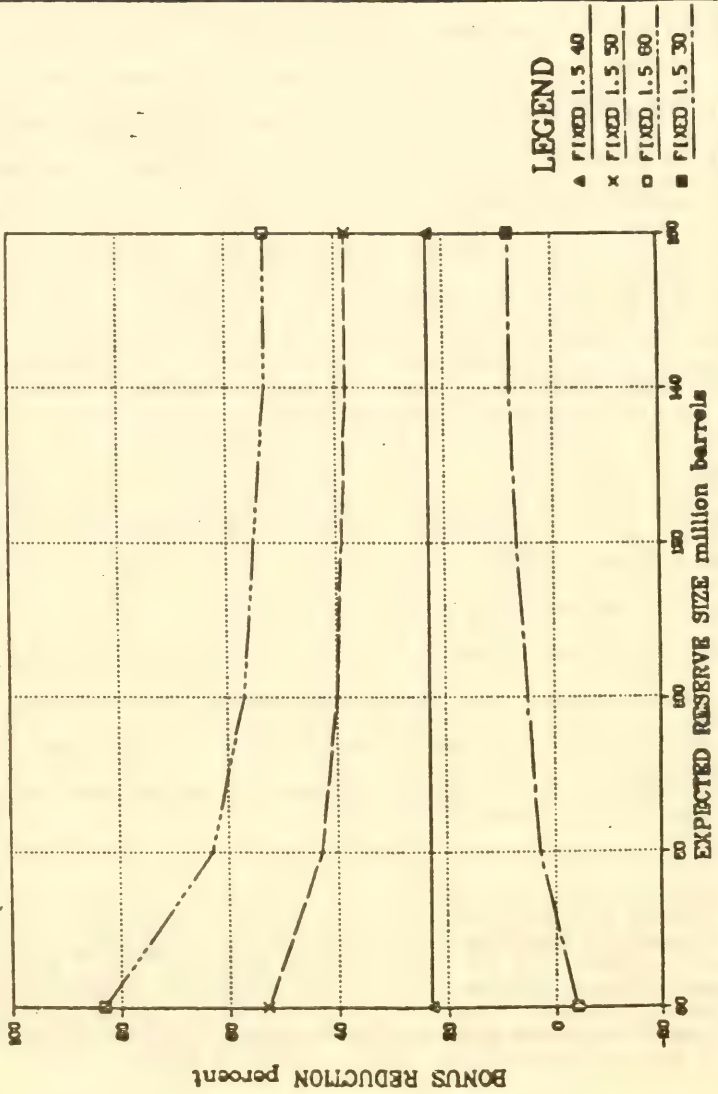
to the government. Consequently, the value of the lease decreases. This is shown in Figure 1.⁴³

However, as the profit share rate increases, the percent of field discoveries actually developed decreases. Again, this is expected because the increased PSR makes development of a given size discovery less attractive vis-a-vis development of the same discovery at a lower PSR. Although exploration costs remain the same, the reduced present value of producing under a higher PSR more than offsets the reduced cash bonus reduction. Hence, at the higher PSR, a greater proportion of discoveries tend to be abandoned. This is shown in Figure 2. Note that the fixed system with capital recovery factor 1.5 and PSR at 50 and 60 percent generate the highest percent bonus reduction (on Figure 1) but cause fewer fields to be developed (Figure 2). Also, of the four fixed system variations shown in Figure 2, only the 30 percent PSR variation produces more field discoveries than the traditional CB-1/6 royalty system, although the 40 percent PSR variation produces results roughly comparable to the cash bonus system.

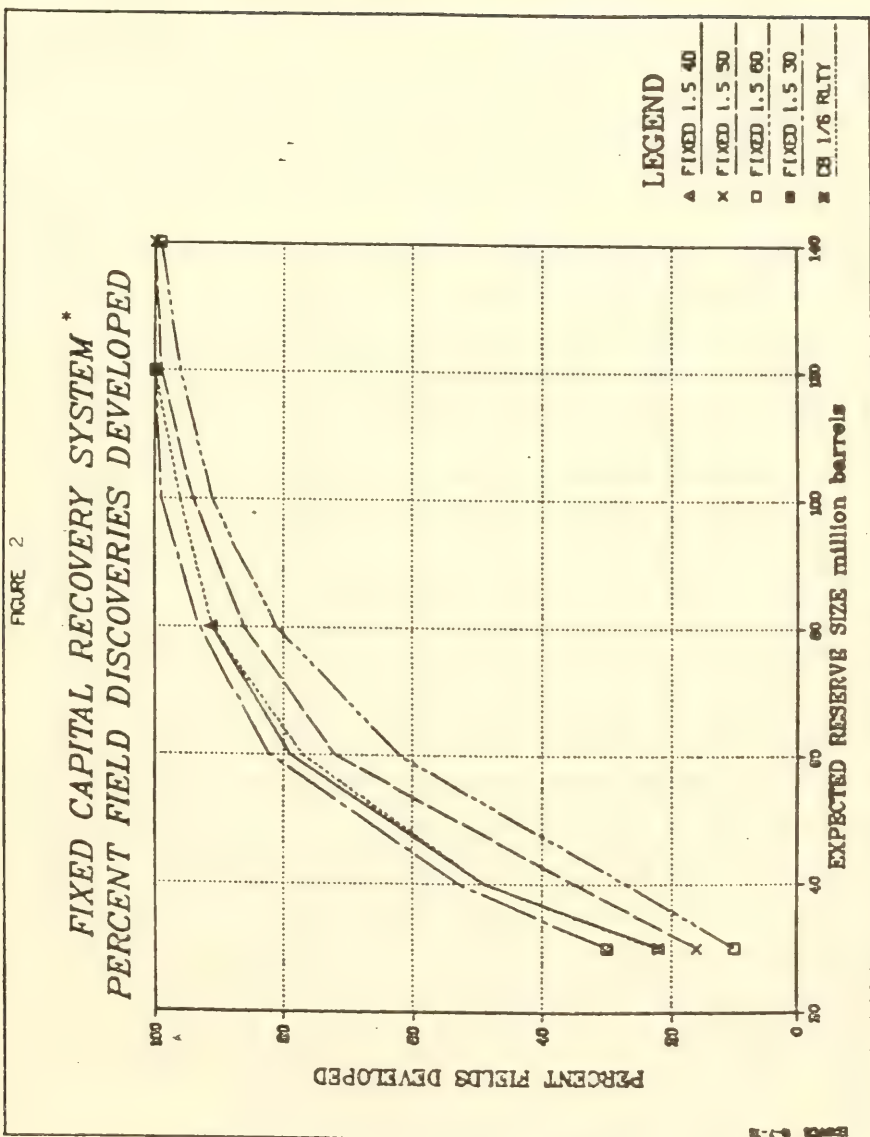
⁴³The legend for Figures 1 through 6 should be interpreted as follows: 'FIXED' means the fixed capital recovery system; '1.5' in the second position means a capital recovery factor of 1.5; '40' in the third position means a PSR of 40 percent. Also, the plots for each system variation start at the lowest expected reserve size that is economic, i.e., lowest reserve size with a positive ATNPV.

FIGURE 1

FIXED CAPITAL RECOVERY SYSTEM*
PERCENT BONUS REDUCTION
 (cash bonus 1/6 system = 100%)



*Shows effect of varying the profit share rate from 30% to 60% at a constant capital recovery factor of 1.5.

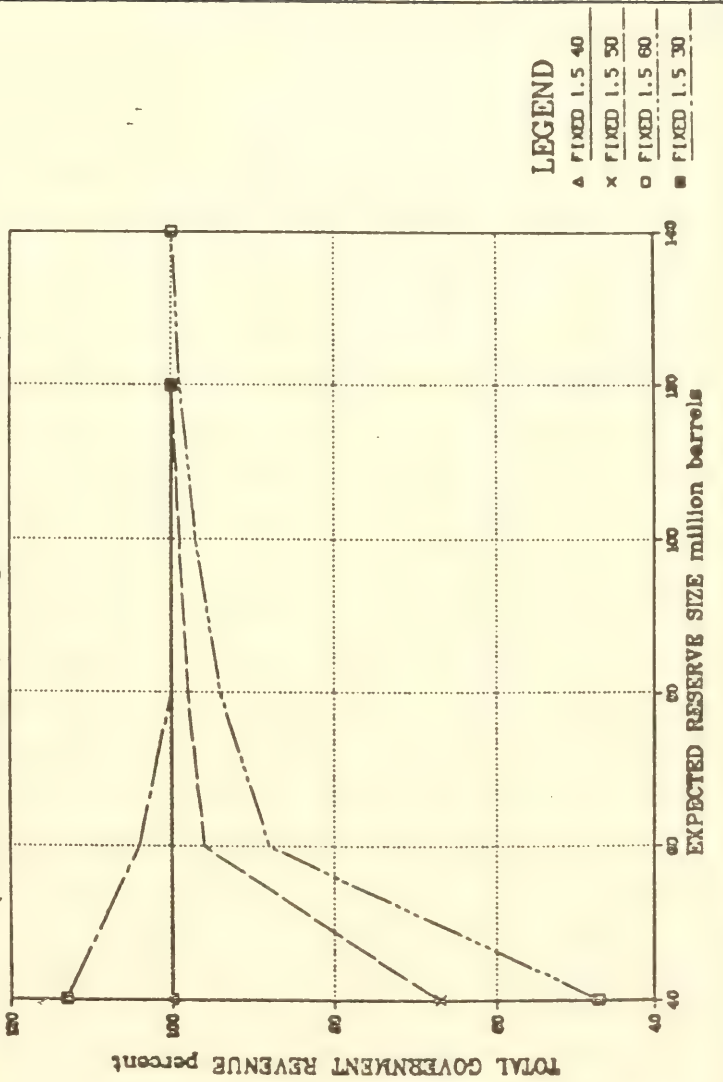


*Shows effect of varying the profit share rate from 30% to 60% at a constant capital recovery factor of 1.5.

Figure 3 demonstrates how total government revenue is affected by the changes in PSR (holding the capital recovery factor constant). This figure, and all like it that follow, compare the total expected government revenue stream for a particular leasing system variation to total government revenue expected under the CB-1/6 royalty system. Total expected government revenue is the present value of all transfer payments to the government: cash bonus, taxes, rents, royalties, profit share payments, etc. Only leasing system variations that produce more field discoveries (than the cash bonus system) at each expected reserve size generate an increase in total government revenue. This phenomenon is true for all profit share systems discussed in this paper (and, is generally true for all leasing systems). Note also that when 100 percent of all field discoveries are developed, the leasing system has no impact on total expected government revenue, because this simulation procedure does not represent the extraction of a risk premium from ATNPV at bid evaluation time (i.e., the "double-discounting" phenomenon discussed previously). There is little empirical evidence to support the selection of a value for this phenomenon. Arbitrary selection of a value for the risk premium would artificially bias the results, making profit share systems appear significantly more attractive than the CB-1/6 system when compared on the basis of percent cash bonus reduction and expected government

FIGURE 3

FIXED CAPITAL RECOVERY SYSTEM*
EXPECTED TOTAL GOVERNMENT REVENUE
 (cash bonus 1/6 system = 100%)



*Shows effect of varying the profit share rate from 30% to 60% at a constant capital recovery factor of 1.5.

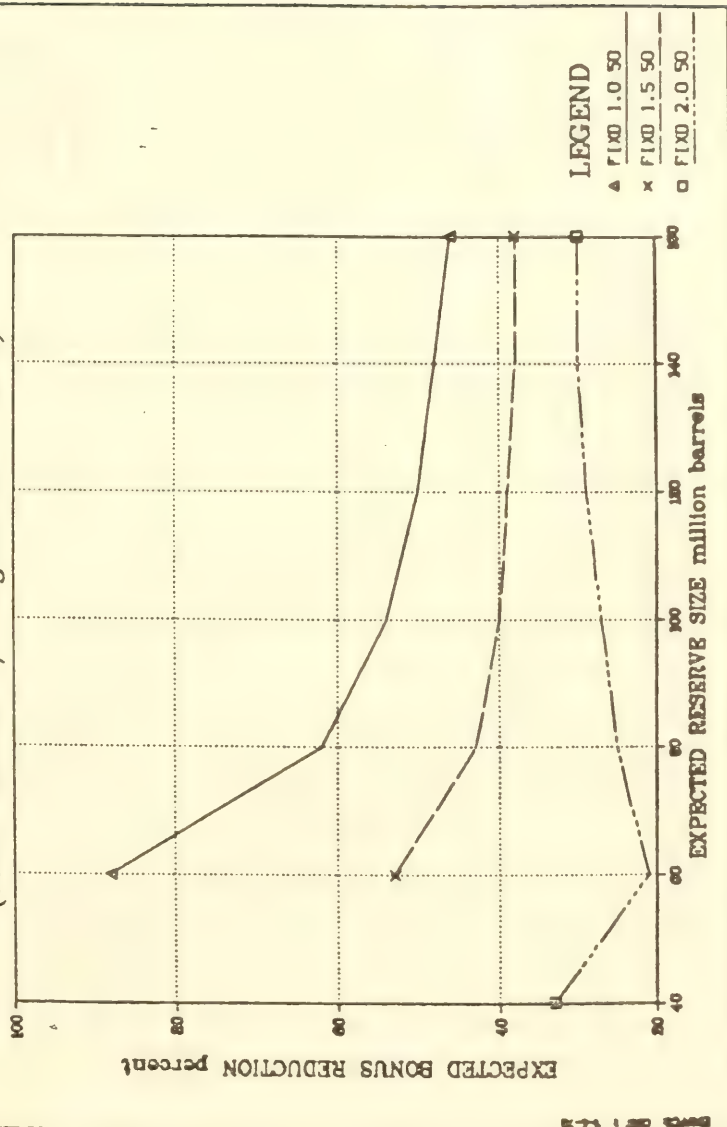
receipts (e.g., Figures 1 and 3). However, this phenomenon operates the same on all profit share systems, thus it is not necessary to explicitly represent it when the primary motive is to select from among the profit share systems.

Figures 4 through 6 show how the fixed system reacts when the PSR is held constant (at 50 percent) and the capital recovery factor is increased. Lower capital recovery factors result in less total allowance for capital recovery, which shelters less lease revenue. This lowers ATNPV, causing large reductions in initial cash bonuses. But, lower capital recovery factors result in fewer field discoveries being developed, hence less total government revenue. Of the fixed system variations shown in Figures 4 through 6, the fixed system with PSP at 50 percent and a 2.0 capital recovery factor performs better than the CB-1/6 system in terms of developing field discoveries and generating government revenue, and it reduces cash bonuses approximately 30 percent. Although not shown here, the fixed system with PSR at 60 percent and capital recovery factor at 2.0 similarly outperforms the cash bonus system and reduces cash bonuses 40 to 45 percent (see Figures 9 through 12 and Appendix Table B-12).

Average production periods for these profit share systems have not been plotted but can be seen in the appendix tables. Except for slight variations at low reserve sizes, all fixed system variations display no tendency to prolong

FIGURE 14

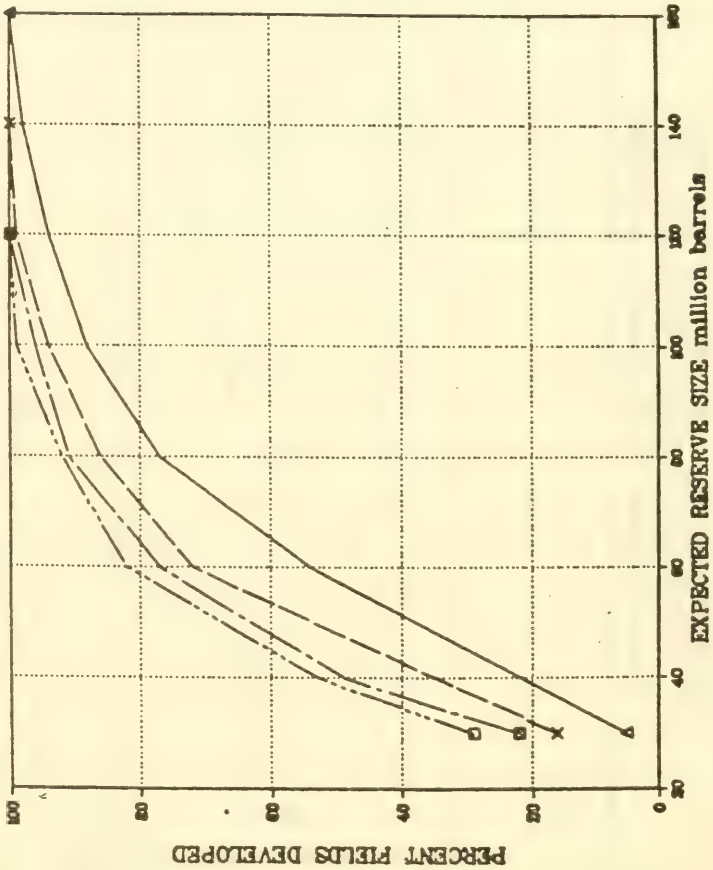
FIXED CAPITAL RECOVERY SYSTEM*
PERCENT BONUS REDUCTION
 (cash bonus 1/6 system = 100%)



*Shows effect of varying the capital recovery factor from 1.0 to 2.0 at a constant profit share rate of 50%.

FIGURE 5

FIXED CAPITAL RECOVERY SYSTEM * PERCENT FIELD DISCOVERIES DEVELOPED



*Shows effect of varying the capital recovery factor from 1.0 to 2.0 at a constant profit share rate of 50%.

the production period. Fourteen years -- 5 years for exploration and development, and 9 years minimum production life -- is the minimum production period allowed in these simulations. Therefore, simulations resulting in production periods of 14.0 generally indicate that a "pure" economic optimum, one independent of practical engineering constraints, would occur at production periods less than 14.0 years. When compared with production periods for the traditional CB-1/6 royalty system, these fixed systems (and, generally, all profit share systems examined in this analysis) provide no great improvement. However, when compared with production profiles for other alternative leasing systems that have been used to reduce cash bonuses (e.g., the semi-log sliding scale royalty system), these profit share systems provide a significant improvement by reducing the tendency to prolong production time periods. Simulations of fixed system variations discussed to this point have assumed costs typical of those experienced on middle-Atlantic OCS leases. However, the structure of costs, i.e., exploration costs, development costs, and production costs, can all change (a) in absolute magnitude and (b) relative to each other depending on a particular OCS region. Thus, it is important to understand the sensitivity of a leasing system to changes in this structure of costs.

Several simulations using costs typical of the Gulf of Mexico were made on the fixed system variations that perform-

ed well in simulations with middle-Atlantic OCS costs. The results are shown in Table 2. One obvious difference is that the smaller reserve sizes are far more economic to produce in the Gulf than in the middle-Atlantic. More importantly, the fixed system variation that produced "best" results for middle-Atlantic costs, 2.0 capital recovery factor and 60 percent PSR, is still very effective in reducing cash bonuses, particularly for the lower reserve sizes. However, this variation causes a slight decrease in the percent of field discoveries developed when compared with the CB-1/6 fixed royalty system simulated for Gulf costs (Appendix Table A-2). As Table 2 shows, reducing the PSR to 50 percent causes cash bonuses to increase somewhat, but also brings the percent fields developed figure back into line (i.e., improves it with respect to the CB-1/6 royalty system).

It is difficult to distill from the results of these costs runs a general rule that allows one to prejudge which fixed system variation is best suited to a particular OCS cost region. Ceterus paribus, system performance depends on the relative magnitude of exploration costs versus development and production costs. Comparing the Gulf of Mexico to the middle-Atlantic region, development costs drop roughly 46 percent while operating costs drop 23 percent. Thus, a capital recovery factor of 2.0 allows sufficiently fast recovery of exploration and development costs, but the PSR must be

Table 2
Sensitivity of Fixed Capital Recovery Systems
to Changes in Cost

A. Percent Bonus Reductions						
Expected Reserves	Gulf of Mexico Costs ¹				Middle-Atlantic Costs ²	
	Fixed 1.5 - 50%	Fixed 2.0 - 50%	Fixed 2.0 - 60%	Fixed 2.5 - 60%	Fixed 1.5 - 50%	Fixed 2.0 - 60%
30	64%	36%	62%	32%	-/- ³	-/-
40	49	33	50	34	+/- ⁴	+/-
60	42	33	47	38	53%	42%
80	40	34	47	40	43	41
100	40	34	47	41	40	41
200	40	36	47	44	40	41
B. Percent Field Discoveries Developed ⁵						
30	-10%	1%	-5%	+4%	- 6%	1%
40	- 7	0	-2	+3	-14	1
60	- 1	0	0	0	- 5	1
80	0	0	0	0	- 5	0
100	0	0	0	0	- 2	0
200	0	0	0	0	0	0

¹These simulations use the same assumptions shown in Table 1, except for cost assumptions as follows:

Exploration costs - cost per exploratory well: \$4.06 million

Operating costs, initial - cost per barrel: .40

Development costs: $C = aR^b$

where: C = cost per unit of installed capacity

a = 296,472

R = expected reserve size

b = .57839

²Uses variable values shown in Table 1. Coefficient "a" in development cost function is 549,473.

³-/- indicates that ATNPV at this reserve size was negative for cash bonus-1/6 royalty system, and slightly negative under this system.

⁴-/- indicates that ATNPV at this reserve size was slightly positive for cash bonus - 1/6 royalty system, and slightly negative under this system.

⁵The entries in this table differ from values plotted in Figures 2 and 5. Numbers shown here are the difference between percent fields developed under the fixed systems and the cash bonus - 1/6 royalty system. A negative entry indicates that fewer fields were developed under the fixed system.

dropped (to 50 percent) to make production from smaller reserve sizes attractive. Experimentation with costs representative of a particular sale region will always be necessary to "fine tune" a system and determine the parameters that generate the "optimal" lease development and production behavior.

A final comment regarding the timing of expenses. For expenses incurred during the pre-production period or during the production period, the fixed system provides no incentives that would change the normal timing of expenses within the period. That is, under the fixed system there is no reason to unincurr and book an expense, for profit share accounting purposes, early in the period rather than late. Standard "cost of capital" reasoning leads one to expect that developers will delay payment of costs until the last possible moment, which is true for the fixed system as well as the royalty systems.

A related problem, however, is whether there are economic incentives built into the fixed system that encourage developers to actually delay production, so that (a) the pre-production period is extended, (b) more expenses will be eligible for the pre-production account, and (c) there is a proportionate increase in total allowance for capital recovery (the "proportionate increase" results from the application of the capital recovery factor to the pre-production

account, provided it is greater than 1.0). The existence of and severity of this problem will be examined in a later section which compares the various profit share systems. Suffice to say here, there are no actual economic incentives that encourage this behavior.

From a public policy standpoint, the pre-production period should end when the lease is ready to commence commercial production, assuming diligent exploration and development activity. As a practical matter, lessees are required to submit for USGS Supervisor approval detailed plans that describe all exploration, development and production activity. These are required by the OCSLA 25(c)(5) for reasons completely unrelated to profit share leasing. The requirement is that these plans must indicate the "expected rate of development and production and a time schedule for performance" (underscoring added). Thus, the USGS Supervisor, who must ascertain the reasonableness of these plans and must similarly approve any modifications of the plans, will be aware of circumstances that delay production and warrant an extension of the pre-production period. Also, the Supervisor has readily available the means to determine when production is being delayed unnecessarily, possibly to extend the pre-production period, and he can act to administratively terminate the pre-production period. In fact, this "leverage" may operate to ensure timely development and production.

Investment Account System

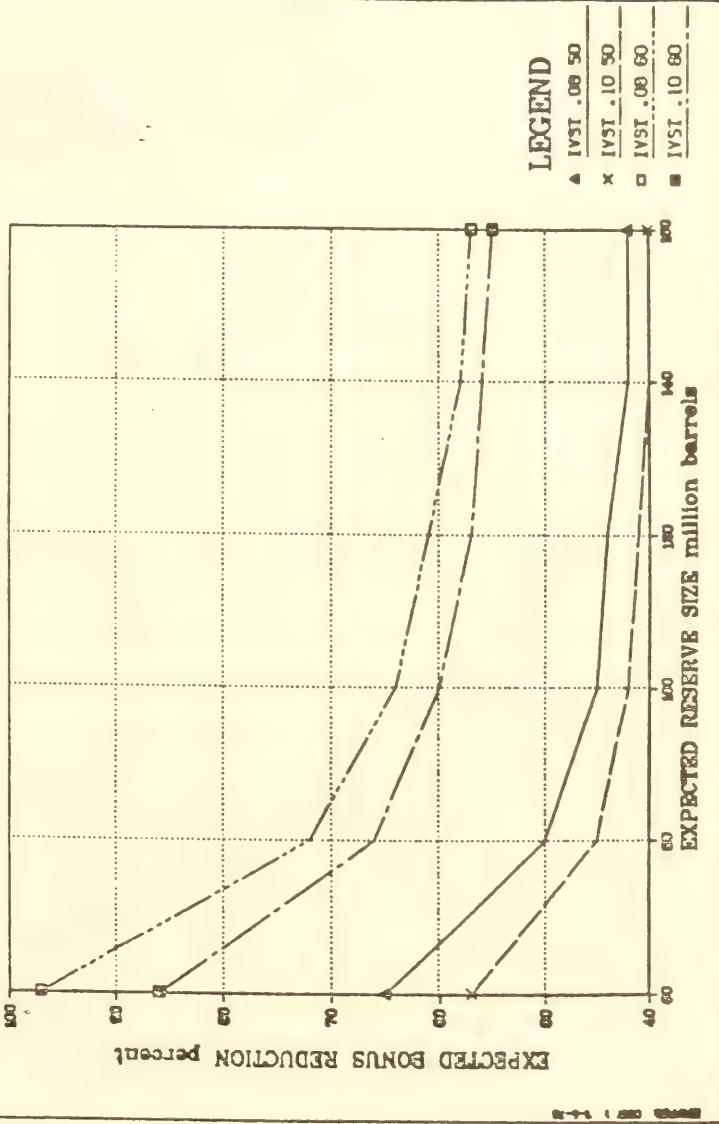
Several variations of the investment account system were simulated using middle-Atlantic OCS costs. The results, which show the effect of increasing the PSR from 30 to 60 percent and the interest rate from .08 to .14 percent, are presented in Appendix Tables C-1 through C-15.

Figure 7 and 8 show how changes in the interest rate and the PSR affect performance of the investment account system. Holding the PSR constant at 50 percent, a change in the interest rate from .08 to .10 causes ATNPV to increase (because more lease revenue can be sheltered) and the percent bonus reduction to decrease. Holding the interest rate constant, an increase in the PSR from 50 percent to 60 percent reduces lease ATNPV and increases the percent bonus reduction. However, of the four investment account variations shown here, none result in as many field discoveries being produced as the traditional cash bonus-1/6 fixed royalty system. Under the middle-Atlantic structure of costs, an interest rate of approximately 14 percent and a PSR of 50 percent are required before the percent of fields discovered exceeds that for the CB-1/6 fixed royalty system, and the percent bonus reduction approaches that obtained by the fixed 2.0-60 percent system. No investment account system variation was found that developed more fields than the CB-1/6 system and reduced cash bonuses more than the fixed system.

FIGURE 7

INVESTMENT ACCOUNT SYSTEM *

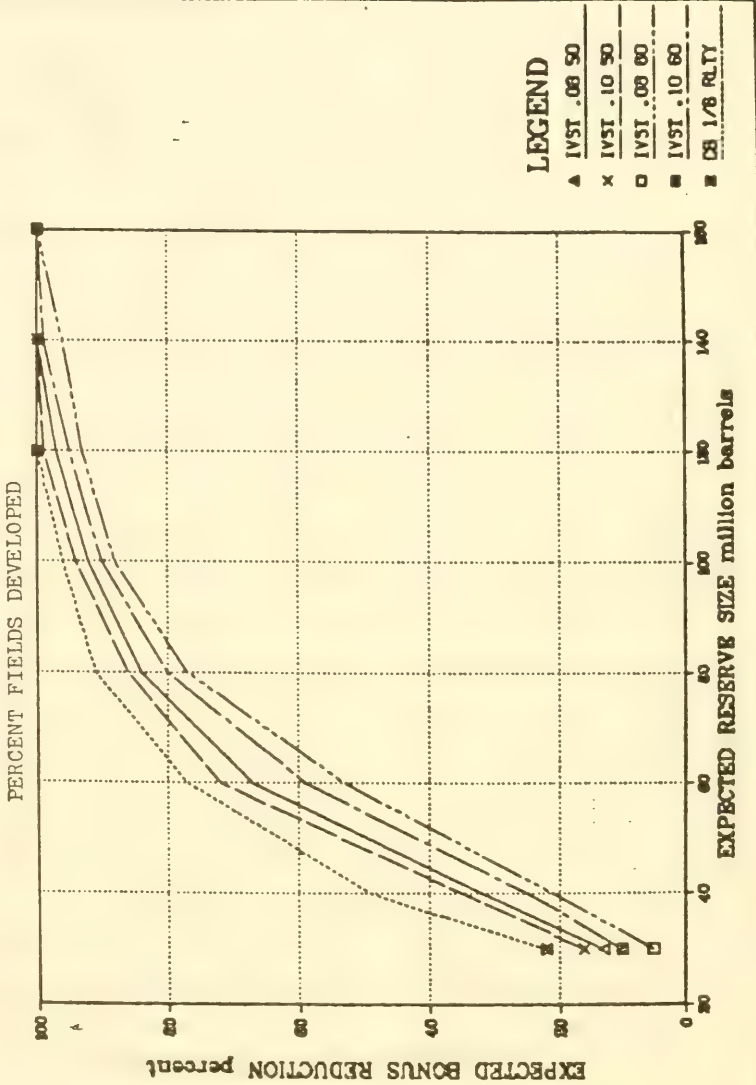
PERCENT BONUS REDUCTION
(cash bonus-1/6 system = 100%)



*Shows effect of profit share rates of 50% and 60%, and interest rates of 8% and 10%.

FIGURE 8

INVESTMENT ACCOUNT SYSTEM *



*Shows effect of profit share rates of 50% and 60%, and interest rates of 8% and 10%.

A scan of the appendix tables for the investment account system shows that average production time periods are essentially the same as for the fixed system. This is true for all investment account system variations examined.

Simulations of the investment account system were also made using Gulf of Mexico costs. Table 3 compares investment account variations simulated for these two cost regions. Given that the timing of exploration and development costs is unchanged (as are the timing of production expenses and revenues), the investment account system shows less sensitivity to changes in cost structure than does the fixed system. That is, for the particular set of parameters defining an investment system, a change in cost does not appear to change the resulting percentage cash bonus reduction as much as would result under the fixed system.

The previous section discussed the degree to which the fixed system is sensitive to the timing of expenses (or revenues) within the pre-production or the production periods. The fixed system is insensitive to this aspect of timing. However, while the investment account system does not administratively divide the lease cycle into two time periods (pre-production versus production), the investment system is very sensitive to the problem of timing. To get results comparable to the fixed system, the simulation analysis indicates that practical implementation of the investment system

Table 3

Investment Account Systems

Expected Reserves (MMB)	A. Percent Bonus Reduction (cash bonus-1/6 royalty = 100%):									
	Gulf of Mexico Costs ¹					Middle-Atlantic Costs ²				
	.08-50%	.10-50%	.12-50%	.14-50%	.08-50%	.10-50%	.12-50%	.14-50%	.14-50%	
30	73%	68%	61%		-/- ³	-/-	-/-	-/-	-/-	
40	54	51	48		+/- ⁴	+/-	+/-	+/-	+/-	
60	46	44	42		65%	57%	49%	38%	38%	
80	43	42	41		50	45	41	37	37	
100	42	41	40		45	42	40	37	37	
200	40	40	40		41	40	39	38	38	
B. Percent Discoveries Developed ⁵										
30	-12%	-10%	-7%		-9%	-6%	-2%	-2%	-2%	
40	-9	-7	-5		-17	-14	-4	-4	-4	
60	-4	-1	0		-10	-5	-2	-2	-2	
80	0	0	0		-7	-5	-1	-1	-1	
100	0	0	0		-4	-2	0	0	0	
200	0	0	0		0	0	0	0	0	

¹See Footnote 1, Table 2²See Footnote 2, Table 2³See Footnote 3, Table 2⁴See Footnote 4, Table 2⁵See Footnote 5, Table 2

would require using interest rates substantially higher than the generally assumed discount rate. But, when the allowed interest rate on the investment account is greater than the assumed discount rate, a developer is automatically provided a "return" that increases as a function of time, i.e., from the day the expense is booked in the investment account to the day the expense (and accumulated interest) is matched with production revenues. Assuming continuous compounding, the lessee "earns" at the rate:

$$e^{(i-r)t}$$

where "i" is the allowed interest rate on the investment account "r" is the assumed discount rate, and "t" is the elapsed time between "booking" the expense and matching it against revenue.

Opportunities to benefit from this timing anomaly come from two sources. First, a developer can actually pay development expenses sooner than would be expected under comparable development schedules for other systems. To the extent this accelerates development and production, it is not necessarily a bad feature. However, to the extent actual production is not accelerated, this aspect of the investment account system presents a significant administrative problem.

Regulations will have to define what constitutes a "normal" pattern of exploration, development, and production expense so that attempts to artificially accelerate the timing of expenses can be detected. Second, a developer can appear to pay expenses sooner than actually occurred. This is particularly disturbing because, rather than eliminating an element of controversy from the use of profit share systems, i.e., disputes over what constitutes the first day of production, the investment account system builds into the system many additional opportunities to question expense timing. Thus administrative problems are compounded, not alleviated.

Auditors will need to examine the timing and booking of expenses in each accounting period, because accelerating (on the books) the debiting of an expense item for just one time period provides automatically a return of sufficient magnitude to justify a lessee's effort to substantiate his case, if questioned. In any event, the timing problem is one that will require greater attention and specificity in the writing of regulations, and more auditing to control. The practical significance of this problem is, again, highlighted by the fact all simulations indicate interest rates well above assumed discount rate are needed to make investment account systems perform adequately under the structure of costs and timing of development expected in OCS regions.

Annuity Capital Recovery System

Many variations of the annuity capital recovery system were simulated using profit share rates from 30 to 60 percent, annuity time periods of three to seven years, and annuity interest rates from .08 to .14. These results are shown in Appendix Tables D-1 through D-8. The best example of the annuity system is plotted on Figures 9 through 12 (discussed in a later section). In general, short (approximately three year) annuity time periods at discount rates equal to or higher than the assumed discount rate were required to generate results comparable to the fixed capital recovery system.

A detailed discussion of the annuity system will not be presented, although the appendix tables provide all information needed to make this analysis, because the results of any annuity capital recovery system can be reproduced with a fixed capital recovery system. The effect of any combination of annuity factors (time period and interest rate) can be basically duplicated with the selection of an appropriate capital recovery factor. Also, using the fixed capital recovery system has several advantages over the annuity system. First, the annuity system creates an upper bound on the amount of allowance for capital recovery available in any production reporting period, which the fixed capital system does not. Thus, the practical effect of an annuity system is to prolong

the recovery of invested capital. For any set of parameters for the annuity system, a fixed system variation can be found which produces slightly better results, if for no other reason than capital recovery is accelerated. Second, the fixed system requires setting only two parameters -- the profit share rate and the capital recovery factor -- while the investment account system requires three -- profit share rate, annuity time period, and annuity interest rate.

Comparison of Leasing Systems

This final section (1) continues the discussion of profit share systems by directly comparing certain features of the fixed and the investment systems and (2) concludes the study by comparing the best example of each profit share system examined in this study to other alternative leasing systems.

Regarding the problem of development expense timing within the pre-production period, the relative sensitivity of each system to this problem can be illustrated with the simulation results presented in Table 4. This table shows the effect of least ATNPV when the timing of development expenses is altered. The "normal" pattern is that described in Table 1. The accelerated pattern represents development expenses

Table 4

Effect on ATNPV of Changing the Timing of Development Expenses
(100 million barrel reserve size, mid-Atlantic costs,
production begins in year six)

Development Expense Timing	Lease ATNPV (millions)	
	Investment System .14 - 50% ¹	Fixed System 2.0 - 60% ²
5 year - Normal ³	\$28.34	\$26.22
5 year - Accelerated ⁴ (5: 0-5-5)	\$29.25	\$23.94

¹Interest rate at 14 percent; profit share rate at 50 percent.

²Capital recovery factor at 2.0; profit share rate at 60 percent.

³The "normal" pattern is described in Table 1.

⁴This accelerated schedule is: no development expense year 1, 50 percent of total lease development expense in years 2 and 3.

incurred equally in years two and three. In all cases, production does not begin until year six. The length of the development (pre-production) period is unchanged, as is the timing of production revenues and expenses. The system variations shown in Table 4 represents the "best" variation of each system for the mid-Atlantic cost region.

Table 4 shows that for the investment account system there is an increase in ATNPV which results purely from the acceleration of development expenses. Conversely, the fixed system suffers a decrease in lease value. The inference drawn from these results is that an "artificial" manipulation of the timing of development expenses (or, in general, the timing of any expense) can result in an increase in lease value for the investment system. Note further that Table 4 shows an acceleration of actual expenses; if an expense can be entered in the profit share accounts sooner than it is actually paid, an additional increase in lease ATNPV will result. This underscores the critical role that expense timing plays in lease economics for the investment account system, and the added reliance on compliance auditing that will be required if the investment account system is implemented.

The problem of altering expense timing within the pre-production period has been discussed, but there is a related problem that centers on shifts in the "date of first produc-

tion," which has not yet been examined. Administratively, the investment account system does not define the "date of first production" because costs are not differentiated on this basis. However, both systems are sensitive to shifts in the date that commercial quantities of production are established, as shown in Table 5.

The top of Table 5 (part A) shows the effect on the investment account system of adding an additional year to the pre-production period, and adding an additional year plus 20 percent more cost to the pre-production period. The bottom of Table 5 shows the effect of these changes on the fixed system. These simulations are for a 100 million barrel reserve in the mid-Atlantic cost region. They are compared with results under the normal five year development pattern.

Under the investment account system, at an interest rate of 14 percent (which is needed to get reasonable system performance), the effect of delaying production one year at no additional development cost is a drop in ATNPV of 24 percent. This compares with a drop in ATNPV for the fixed system of 36 percent. Thus, the fixed system provides far less incentive to prolong the development period than the investment account system, even though the fixed system's capital recovery mechanism depends on the event "day of first production." What happens if the development period is extended to include more costs in the fixed system's more favorable pre-production

Table 5

Effect on ATNPV of Changing Development Period and Adding Development Cost
(100 MMB Reserve Size, Middle-Atlantic Costs, millions of dollars)

A. Investment Account System (50% PSR)			
Production Period	Interest Rates		
	.08	.10	.12
5 year	\$22.4	\$25.6	\$26.9
6 year (no additional cost)	16.6	18.1	19.8
6 year (20% additional cost in year 6)		15.2	17.0
			19.3
B. Fixed Capital Recovery System (2.0, 60% PSR)			
5 year			\$26.2
6 year (no additional cost)			16.8
6 year (20% more cost)			11.1

period? Under the fixed system, delaying production 1 year to include 20 percent more development costs causes a reduction in total lease ATNPV of 58 percent. Under the investment account system the reduction is only 32 percent. Thus, while both systems show that prolonging the development period is not economically expected behavior, the fixed system provides almost twice the incentive to expeditiously develop a lease and commence production.

There have been concerns that (for the fixed system) a capital recovery factor of 2.0 implies a lessee "automatically" earns a 100 percent return on each dollar invested (or, similarly, he earns 75 percent when the capital recovery factor is 1.75). Further, if true, this implies that "gold-plating", i.e., over-investing, would be rewarded under the fixed system. However, the results of Table 5 show this is not the case. For the fixed system example, increasing the development costs 20 percent in the sixth year result in a 34 percent reduction in total lease value. This is certainly no incentive to add additional development costs, for, to be economic, one must see at least a proportionate increase in lease value as development costs increase.

To recapitulate, the simulation analyses presented in this study shows that the fixed capital recovery system (using a 2.0 capital recovery factor and a 60 percent profit share rate):

- improves, with respect to the CB-1/6 royalty system, the percent of fields expected to be developed, and thus enhances efficient resource recovery;
- reduces expected cash bonuses approximately 40 percent, with respect to the CB-1/6 royalty system, and thus promotes the competition improvements desired by the Congress;
- increases slightly the amount of expected government revenues, a stated objective of Congress;
- and does not result in any prolongation of production, another indicator of efficient resource recovery.

Further, comparing the investment account system with the fixed capital recovery system:

- no investment account system variation was found that (a) resulted in a greater percentage of cash bonus reduction while (b) maintaining as high a percentage of fields developed as is available under the fixed capital recovery system;

- the investment account system provides less incentive for expeditious lease development;
- the investment account system is extremely vulnerable to the artificial acceleration, for accounting purposes, of the timing of all expenses.

This later defect cancels any administrative simplicity presumed to result from not defining a "date of first production." It puts extreme pressure on the accuracy of regulations that must be available to define the "normal" pattern of lease development (and payment of costs), and it increases the reliance on government auditing efforts to monitor compliance during each accounting period. Moreover, a regulatory definition of the "date of first production" that is coupled with (required) lease development plans could be a major incentive for diligent lease development when used with the fixed capital recovery profit share system.

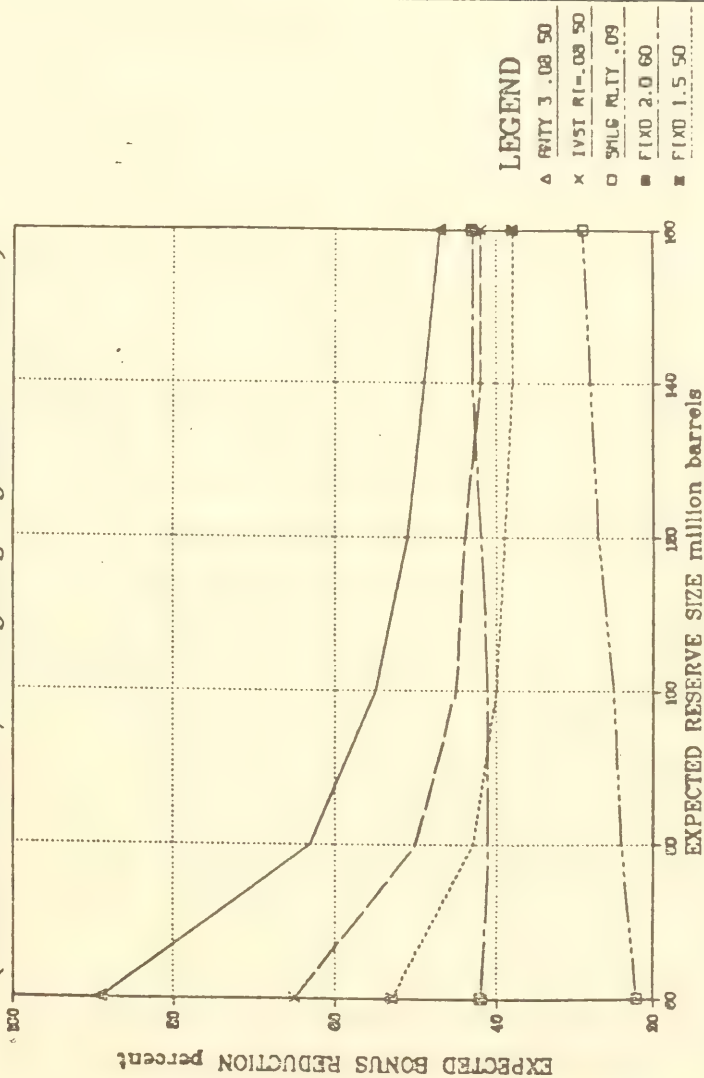
Figures 9 through 16 serve to relate the advantages expected of profit share leasing to those of other alternative bidding systems. The simulation results on which these figures are based assume mid-Atlantic OCS costs.

Figures 9 through 12 compare several "better" variations of profit share systems with a currently popular alternative system -- the semi-log sliding scale royalty system (with .09 coefficient).⁴⁴ Figure 9 shows that the annuity capital recovery system with an annuity period of three years at 8 percent interest and a 50 percent profit share rate achieves significant cash bonus reductions. However, Figure 10 shows that the fewest field discoveries are developed under this annuity system. The results for other profit systems are consistent with this behavior, i.e., generally, a higher percentage cash bonus reduction results in a lower percentage of field discoveries produced. Note that the fixed system with 2.0 capital recovery factor and a 60 percent profit share rate shows a fairly uniform reduction of cash bonuses of 40 to 45 percent. This is almost twice the bonus reduction of the semi-log sliding scale royalty system. The

⁴⁴The legend for Figures 9 through 12 is read as follows: "ANTY 3 .08 50" means annuity capital recovery system, three year annuity period at eight percent, 50 percent profit share rate; "IVST RI = .08 50" means investment account system with eight percent interest rate, 50 percent profit share rate; "SMLG RLTY .09" means semi-log sliding scale royalty system, .09 coefficient; "FIXD 2.0 60" means fixed capital recovery system, 2.0 capital recovery factor, 60 percent profit share rate; "FIXD 1.5 50" means fixed system, 1.5 capital recovery factor, 50 percent profit share rate; "CB 1/6 RLTY" means traditional cash bonus system, .167 royalty rate.

FIGURE 9

COMPARISON OF PROFIT SHARE SYSTEMS
PERCENT BONUS REDUCTION
(cash bonus-1/6 royalty system = 100%)



LAWRENCE, 1964

investment account system achieves a higher percentage bonus reduction than the fixed system at the lower reserve sizes. However, these two systems "cross" at approximately the 130 million barrel reserve size; from that point the fixed system achieves greater cash bonus reductions. Moreover, the investment account system is significantly lower than the fixed system on the basis of percent field discoveries developed, shown on Figure 10. In fact, only the fixed system with 2.0 capital recovery factor and 60 percent profit share rate, and the semi-log sliding scale royalty system result in more field discoveries being developed than the traditional cash bonus-1/6 royalty system.

Figure 11 shows the expected total government revenue that is generated by each system. Only the fixed system (2.0; 60 percent) consistently generates a level of government revenue that equals the cash bonus-1/6 royalty system. Further, Table 12 shows the advantage of using profit share systems instead of the alternative semi-log sliding scale royalty system: the later system tends to prolong the production life of a lease while profit share systems do not exhibit this tendency.

Figures 13 through 16 illustrate, using the economic criteria developed for examining the profit share systems, the characteristics of other alternative leasing

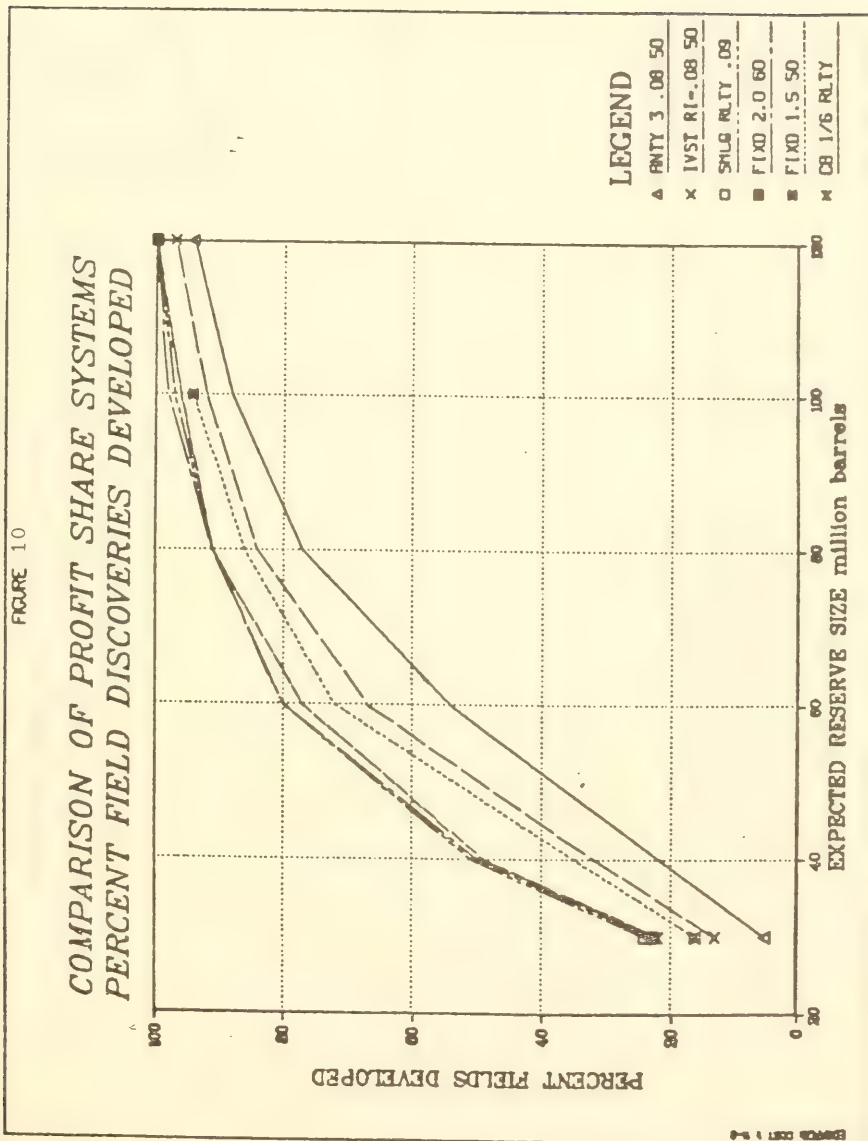
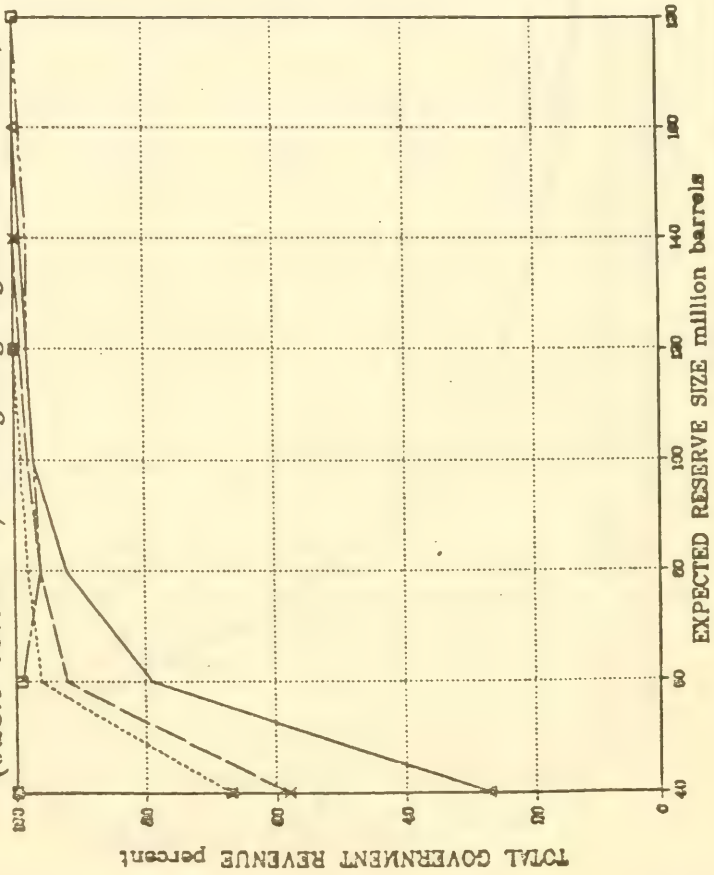


FIGURE 11

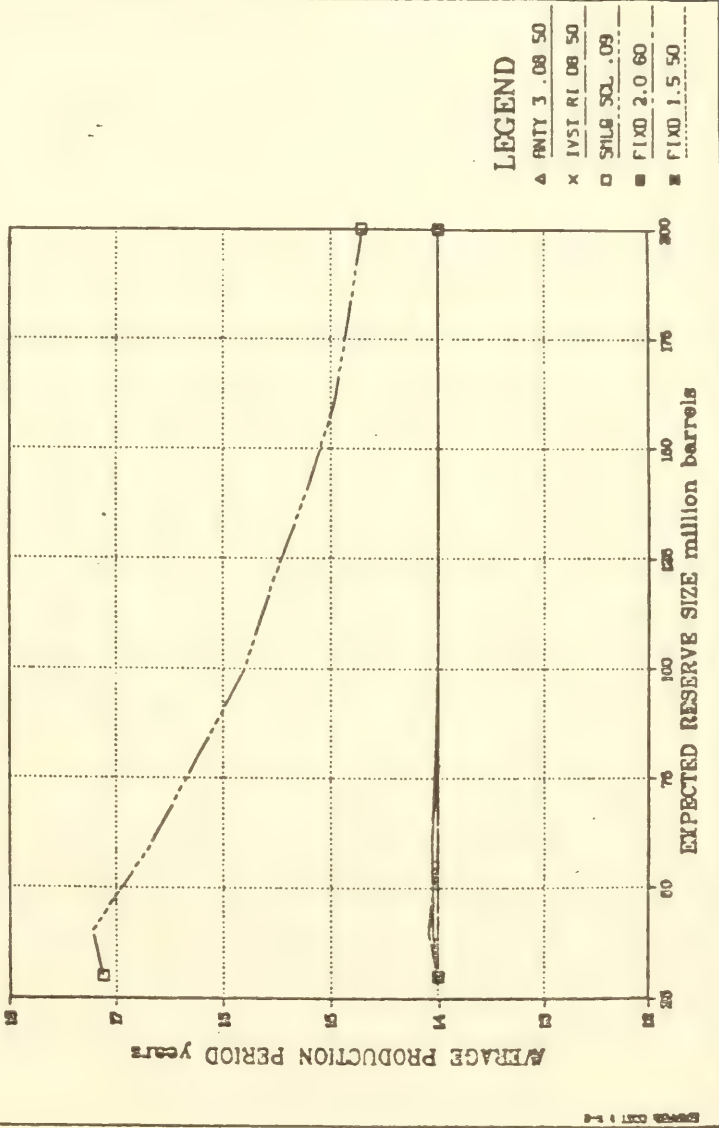
COMPARISON OF PROFIT SHARE SYSTEMS
 EXPECTED TOTAL GOVERNMENT REVENUE
 (cash bonus-1/6 royalty system = 100%)



Source: Data from the U.S. Department of the Interior, Bureau of Land Management, 1970.

FIGURE 12

COMPARISON OF PROFIT SHARE SYSTEMS AVERAGE PRODUCTION PERIOD



systems.⁴⁵ The semi-log sliding scale system (with coefficient of .09) is also shown on these figures to serve as a reference, and to show why this system was chosen over the others for use as an alternative leasing system.

Figure 13 shows that the linear sliding scale royalty system and the cash bonus system with a royalty rate of 40 percent both produce significant cash bonus reductions. However, Figure 14 shows that neither system results in a percentage of field discoveries developed as high as the cash bonus-1/6 royalty system. Also, expected government revenues for all alternative systems shown on Figure 15 are lower than the cash bonus-1/6 royalty system. More importantly, Figure 16 shows that the system producing the highest cash bonus reduction also significantly prolongs the production life of the lease. Note on Figures 14 and 15 that the royalty bidding system results in the least percentage of field discoveries being developed and the lowest expected total government revenue. In general, the semi-log sliding scale

⁴⁵The legend for Figures 13 through 16 is read as follows: "CB 40 RLTY" means traditional cash bonus royalty system with .40 royalty rate; "LIN SLI SCL" means linear sliding scale royalty system; "RCP SLI SCL" means reciprocal sliding scale royalty system; "SCLG SCL HI" means semi-log sliding scale royalty system, .11 coefficient; "SLG SCL .09" means semi-log sliding scale royalty system, .09 coefficient; "CB 1/6 RLTY" means traditional cash bonus system with .167 royalty rate; "RLTY BID" means royalty bid system.

FIGURE 13

COMPARISON OF LEASING SYSTEMS
PERCENT BONUS REDUCTION
(cash bonus - 1/6 royalty system = 100%)

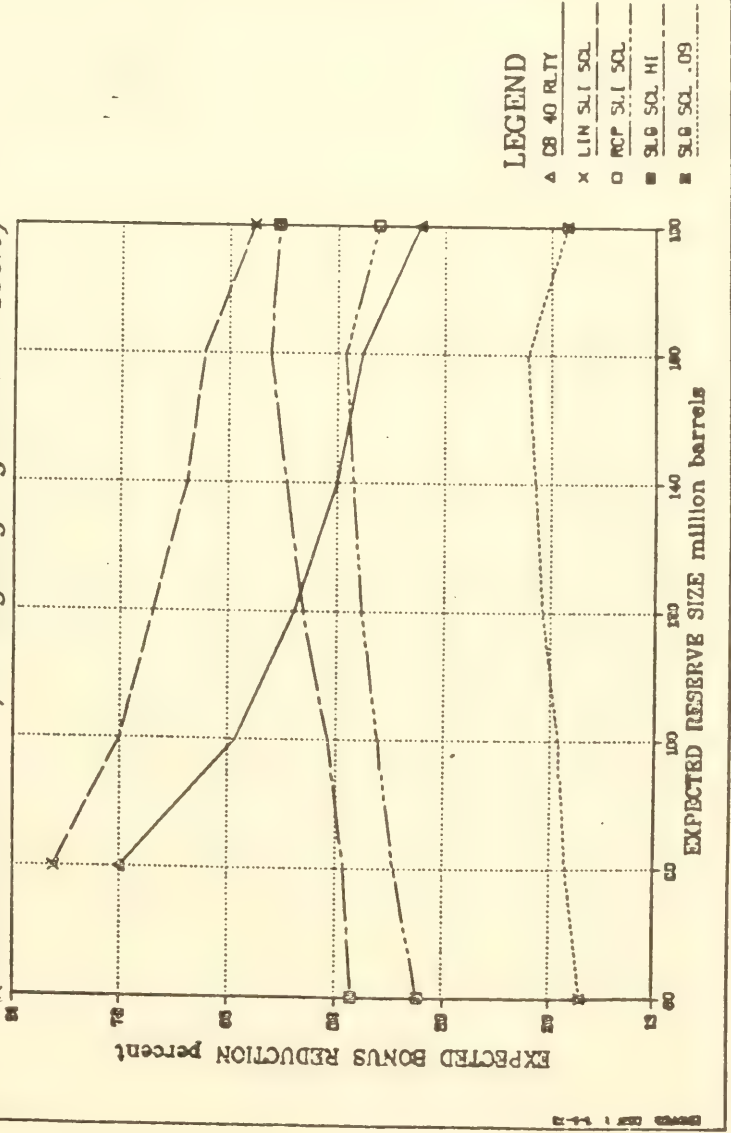
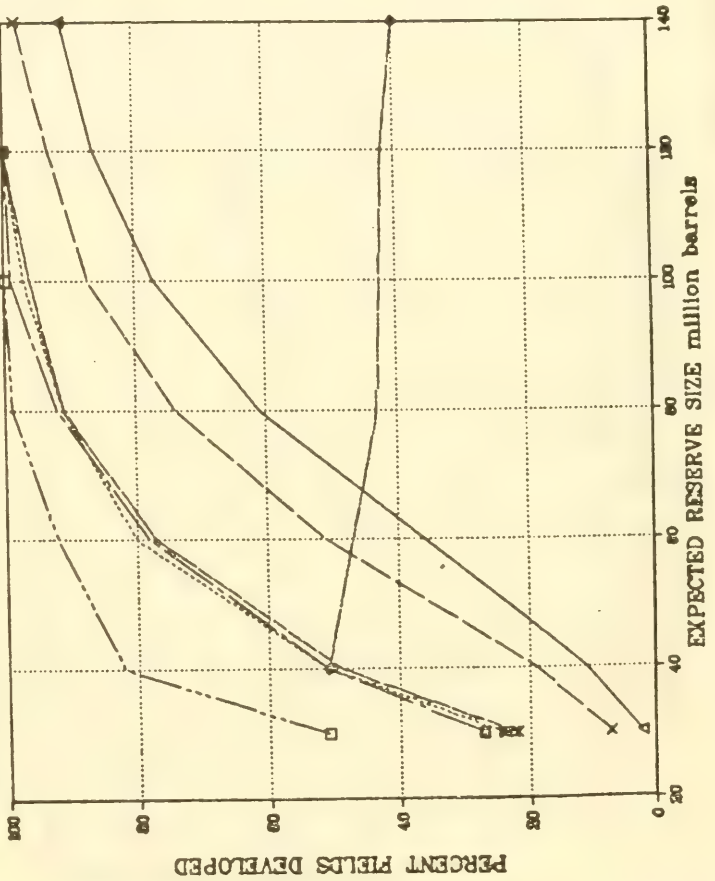
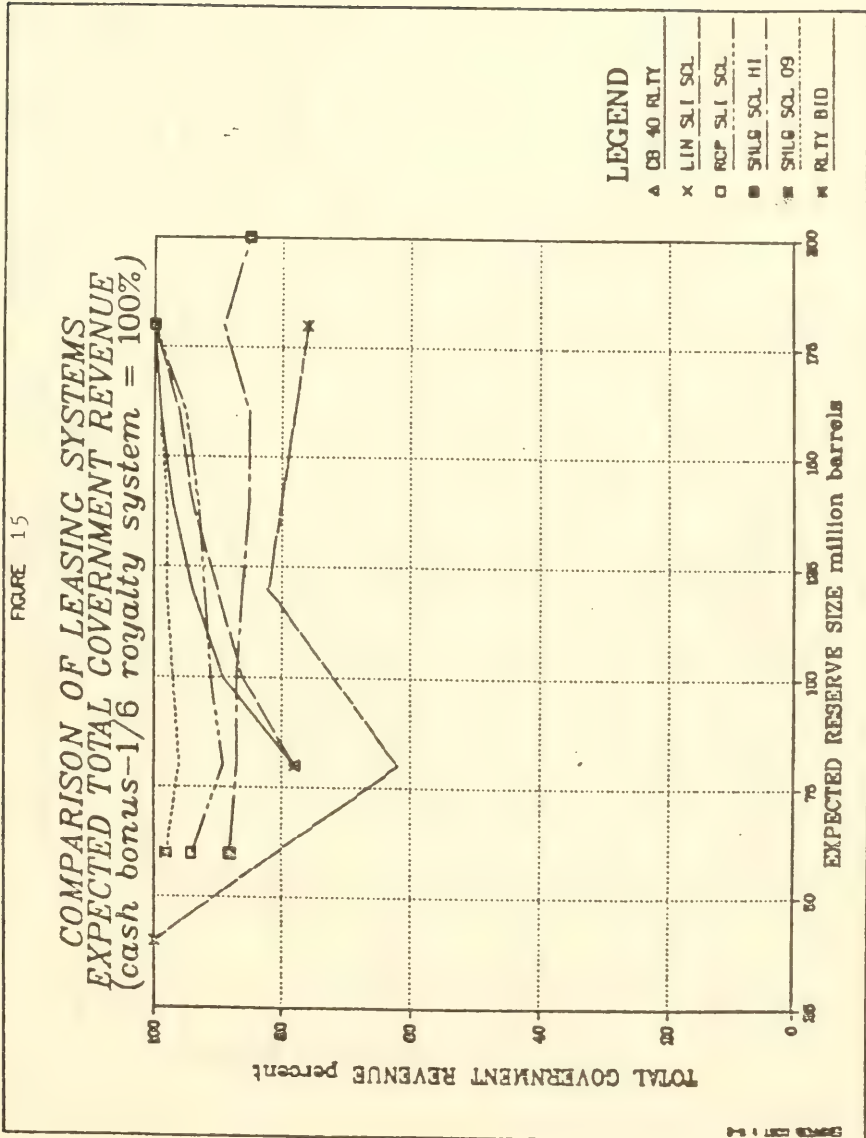


FIGURE 14

COMPARISON OF LEASING SYSTEMS
PERCENT FIELD DISCOVERIES DEVELOPED





royalty system is the best compromise among the systems shown in Figures 13-16.

Conclusions

To conclude, the analysis presented in this study indicates that the fixed capital recovery system is the best candidate for initial implementation of profit share leasing. The fixed system variation selected for each lease sale will depend on anticipated costs of exploration, development and production. However, it is expected that use of the fixed capital recovery profit share system will allow cash bonuses to drop approximately 40 percent from levels expected under the traditional cash bonus bid-1/6 fixed royalty system. This represents a significant improvement over the performance of alternative leasing systems currently available.

OCS OVERSIGHT OF 1978 AMENDMENTS

WEDNESDAY, MARCH 14, 1979

HOUSE OF REPRESENTATIVES,
SELECT COMMITTEE ON THE OUTER CONTINENTAL SHELF,
Washington, D.C.

The committee met, pursuant to notice, at 1:40 p.m., in room 2218, Rayburn House Office Building, Hon. John M. Murphy, chairman of the committee, presiding.

Present: Representatives Murphy, Hughes, Breaux, and Forsythe.

Staff Present: Carl Perian, staff director; Lawrence J. O'Brien, chief counsel; Thomas R. Kitsos, majority counsel; C. Grady Drago, minority counsel.

The CHAIRMAN. The committee will come to order. Today, we resume proceedings which we commenced last week, overseeing the implementation of the 1978 Outer Continental Shelf Lands Act Amendments. As our hearings last week vividly demonstrated, the enactment of the 1978 OCS legislation was but a first step in what appears to be a long and ponderous process of putting into place a new OCS regime.

Last week's witnesses brought to the committee's attention several instances where legislative intent has not been strictly adhered to. In addition, the testimony of several administration representatives suggested several areas of disagreement within the administration on the pace of proposed OCS development.

Today, we will hear from industry representatives, the Coast Guard, and representatives of the diving community to further assess the progress of, and the reaction to, the landmark statute that was enacted last year.

Before proceeding with our distinguished guests—we were going to hear from Representative David Emery, but we will hear from him later. We certainly appreciated his appearance before the Rules Committee last week in which he strongly supported the retention of the OCS Committee. He has proven himself a powerful and articulate advocate of prudent exploitation of offshore oil and gas.

We will start with a panel—the panel will be comprised of George Lawrence, the president of the American Gas Association; Carl Savit, senior vice president, Western Geophysical, and he is representing the National Ocean Industries Association; Mr. Kenneth Wallace, president of Taylor Diving & Salvage Co., and he will be accompanied by James Eberle and Dan Wilson.

Gentlemen, would you please come up to the witness table. We have a nameplate for each of you. George, do you want to start off?

STATEMENT OF A PANEL CONSISTING OF GEORGE H. LAWRENCE, PRESIDENT, AMERICAN GAS ASSOCIATION; CARL H. SAVIT, SENIOR VICE PRESIDENT, WESTERN GEOPHYSICAL CO., REPRESENTING THE NATIONAL OCEAN INDUSTRIES ASSOCIATION; KENNETH W. WALLACE, PRESIDENT, TAYLOR DIVING & SALVAGE CO., INC., REPRESENTING THE ASSOCIATION OF DIVING CONTRACTORS, ACCOMPANIED BY JAMES EBERLE, ASSISTANT PROJECT MANAGER, TAYLOR DIVING & SALVAGE CO., INC., AND DAN WILSON, CONSULTANT, TAYLOR DIVING & SALVAGE CO., INC.

Mr. LAWRENCE. Mr. Chairman, we appreciate very much the opportunity to appear before your committee. As you know, the American Gas Association does represent the 300 natural gas distribution and transmission companies of the Nation, and we are very interested in OCS development, because throughout the history of OCS development, particularly in the gulf, some 50 percent of the energy forthcoming has been gas energy, as distinct from oil.

I would like to say, Mr. Chairman, that we worked very closely with this committee and other committees of the Congress while legislation was being considered in the 94th and 95th Congresses, to provide insights regarding different issues reviewed under the legislative process. We wish to commend this committee, in particular, for its excellent efforts during consideration of numerous amendments to OCS legislation in both the 94th and 95th Congresses.

Incidentally, Mr. Chairman, I do plan to summarize this very briefly. We have a comprehensive statement that, with your permission, I would like to have included in the record.

The CHAIRMAN. Without objection, it will be included in the record following your direct remarks.

Mr. LAWRENCE. I would summarize this most briefly, but emphasize a part that I think is most important at this time on page 2, Mr. Chairman. We understand that efforts are underway to potentially fragment OCS oversight among 10 committees of the House, which we firmly believe is unwise in light of the need to effectively develop our Nation's OCS energy resources.

Effective congressional oversight necessitates a coordinated approach. Efficient OCS regulatory implementation must also proceed in this fashion. If oversight is fragmented among many congressional committees, the ability of the legislative branch to assess executive branch administration and implementation of the OCS Act is severely diminished.

In this regard, we strongly submit that maintenance of the OCS oversight function can best be accomplished by the House through establishment of the House Ad Hoc Committee on the Outer Continental Shelf as a select committee for this session of Congress.

As this committee has specifically recognized in this recent series of hearings, there is a continuing need for oversight of the nine Federal departments and two agencies involved in the implementation of this complex and comprehensive piece of legislation. Such oversight could indeed facilitate compliance with the stated objectives of the act, while insuring compliance and cooperation among the Federal agencies and States that have specific roles to perform in OCS development.

Mr. Chairman, on page 3 we have a summary of our specific recommendations which we think will expedite implementation of the OCS Lands Act Amendments of 1978. I would focus very briefly, beginning at the bottom of page 3 and the top of page 4, on the split of decisionmaking between the Department of Energy and the Department of the Interior.

In this regard, we think the scheduling of lease sales should indeed rest with the Department of Energy, and we think this, like the more comprehensive and less fragmented approach that we are recommending for Congress, would accomplish the same purpose in the executive branch.

Again, Mr. Chairman, our statement contains certain specific recommendations that we would urge FERC and other agencies to proceed under your oversight in the implementation of the act, and I will leave those comments for the record and close on that. Thank you.

The CHAIRMAN. Carl, do you want to begin? We apologize for the incorrect spelling of the name "Savit" in our record.

Mr. SAVIT. I find, Mr. Chairman, that I am given an extra "t" more often than I am not, so that the activity here is certainly within the majority, rather than the minority, of potential spellings of my name.

The CHAIRMAN. An extra "t" may be all right on the links, but we certainly admire your prompt and effective action in getting rid of it.

Mr. SAVIT. Thank you. It is a bit difficult, after an informal start like that, to try to get into these formal things. I perhaps will not but simply mention that I am here representing the National Ocean Industries Association, which is an organization of nearly 400 companies that currently are living on the Outer Continental Shelf in one way or another. Most of our companies have something to do, at least, with the production of energy on the Outer Continental Shelf. We have quite a number of them that deal with fisheries, and the like, so that we have a sort of reasonable balance that is attempted to be achieved by the Government, I think, in balanced use of the oceans. Our organization represents a considerable balance of use.

If there is no objection, I will just begin reading from my statement on page 3 and the rest of the statement, if you will, can be put into the record.

The CHAIRMAN. Your entire statement will be printed in the record.

Mr. SAVIT. Thank you, sir. In enacting Public Law 95-372 last year, the Congress, with commendable foresight, enunciated 15 findings, most of which are even more valid today than they were when written. The majority of those findings relate to the pressing national need to develop the energy resources of the OCS.

Even those findings that relate to the need to minimize the impact of OCS energy development on the environment, on other resources, and on State and local governments are directed to expediting development by providing avenues for the resolution of conflicts.

There is no room to doubt that the intent of Congress was to provide for the development of the energy resources of the Outer

Continental Shelf in a responsible manner. Clearly, Congress did not intend that this act would be used to impede or delay the critical process of finding new sources of energy and bringing that newfound energy to the shortage-plagued American public.

Despite the clear intent of Congress, attempts are being made to use the act to halt or delay indefinitely much of the planned and projected exploration of our frontier areas. Lawsuits and administrative objections have been repeatedly raised, almost invariably on procedural grounds. Rarely, if ever, has a serious substantive objection been put forth.

At this moment, plans exist within the administration that, if implemented, will increase the opportunity for delay in the OCS leasing program. In the administration's program to establish a Department of Natural Resources, it is presently planned to separate the existing mechanism for administering OCS exploration permits and the subsequent leasing programs from the mainstream of technical and administrative expertise that now exists.

In the new department, these critical functions would be submerged in a bureau devoted to the management of all marine resources. Within such an arrangement, the interest and motivation to develop energy resources would be subordinated to an interest in preservation of the environment.

In view of our national energy crisis, a further tilt toward preservation and away from energy production could well prove disastrous.

At the regulatory level, the Department of the Interior has published proposed regulations that purportedly are intended to carry out the legislative mandate of the act. In one part of those proposed regulations—sections 252.6 and 252.7—the Secretary gives himself the power to turn over to the States data that he has bought under contractual promise of confidentiality.

He specifically exempts himself from the statutory safeguards of section 26 of the act with respect to data relevant to those Federal waters that lie within 3 miles of State waters. There are adequate provisions in the Act to make available all data that could possibly be needed by State officials to plan joint State-Federal leasing programs. There is no need to take the additional steps of sections 252.6 and 252.7 that could, and probably would, be challenged in the courts as forbidden by the statute and which, in any event, would constitute an unlawful taking of private property without just compensation.

It would appear that the administration is attempting, by regulation and other administrative steps, to circumvent the intent of Congress, not only with respect to program direction, but with respect to such specifics as the protection of proprietary data and onstructure, prelease drilling.

There is little room to doubt that oversight by this committee will remain necessary to insure that the intent of Congress is carried out in the husbanding and development of our Nation's Outer Continental Shelf energy resources.

At this point, I will stop reading the prepared statement, and I would like to elaborate a bit on some of these thoughts. The matter of the reorganization of the OCS administration that is encompassed in the present view by the administration of the Depart-

ment of Natural Resources is the one that I think disturbs many of us very, very strongly.

The present administration of the OCS leasing program is largely handled by the Conservation Division of the U.S. Geological Survey. In the plans that presently exist in the President's reorganization group, it is contemplated that the Conservation Division would be separated from the rest of the Geological Survey and that it would be broken into three parts: A part that would deal with the oceans; a part that would deal with the land oil and gas energy resources; and a part that would deal with the water resources.

These three parts would be put, in turn, into a marine department, a land department, and a water resources department, which means that the overall blanket of technical expertise that exists in the Conservation Division would have to be triplicated and complete, new organizations built—separate hierarchies, each with its technical background and resources.

It seems to us that to do this would disrupt the present leasing program rather badly, and would take at least a year or two to build back up to the level of expertise that presently exists. There would not seem to be any real need for this kind of a separation at the present time.

In addition to that, the parts of the U.S. Geological Survey that would then be delegated to the marine resources group would have a lower level in the organization, and that would be the highest level at which there would be a drive toward development. These groups would be either on an equal level with or subordinated to other groups that would be dealing primarily with preservation and protection, with the general drive to slow down the program.

So we see that if the program is carried out as it presently appears to be planned, it would, in general, slow the entire process. We also see particular difficulties with some of the attempts that the administration is making to circumvent the congressional intent on the subject of onstructure drilling, and I think some of these other witnesses may be intending to talk on that subject and if they have not covered everything that is involved, I am certainly free to answer questions, if you have any, at the end of the panel group. But we have some pretty strong views on the subject of onstructure drilling, also.

I think with that, I would like to finish my prepared statement and leave myself available for questions.

The CHAIRMAN. Thank you, Mr. Savit; we appreciate that.

We will hear next from Mr. Wallace. Mr. Kenneth Wallace is president of the undersea divers association. Mr. Wallace?

Mr. WALLACE. Just a specification. I am the president of the Taylor Diving & Salvage Co., and on the board of directors of the association.

Unlike my two predecessors, I am going to read direct from the statement through its entirety.

Mr. Chairman and members of the select committee, my name is Ken Wallace, and I represent the Association of Diving Contractors. Our organization represents nearly all of the U.S. diving companies operating on the Outer Continental Shelf in support of the offshore petroleum industry's exploration and production programs.

Our request to be heard today is a direct result of actions being taken in implementing 21(e) of the OCS Lands Acts amendments by several Federal agencies that we believe have no relationship to diving safety or technological advancement and will cost the Government untold millions of dollars in the years to come.

Before defining the problem areas to be addressed, I would like to give you an updated, unexaggerated picture of our industry and hopefully, explode a few myths along the way.

First, American companies, technically and contractually, dominate the world's offshore diving business with over 125 saturation and bell diving systems in operation. No other country can seriously challenge America's technological superiority, and if the regulatory process in the United States does not irreparably damage our industry, this advantage can be maintained into the foreseeable future.

Second, domestic operations account for approximately one-tenth of our worldwide activity, employing only about 350 divers at the present time. The size of U.S. offshore diving has often been exaggerated by Federal agencies to justify their involvement in this new and exploitable area.

Third, the use of divers in the offshore petroleum industry, contrary to popular belief, is a function of economics, and the diver can be engineered around if regulation, cost, and political climate creates an unacceptable burden to the user. The diver plays a very minor role in the overall offshore petroleum industry.

Fourth, the diving industry is now in a substantial recession, with some companies reporting their projected sales for 1979 at one-half those of the preceding year. This situation has been caused mainly by operating changes in the North Sea from an explosive exploration and construction phase to slower maintenance and production operations. On the U.S. Outer Continental Shelf, there have been no large discoveries equal to those in the North Sea for which our industry has geared itself to service.

Fifth, there is a large surplus of diving personnel in the United States which is mainly the result of the worldwide slowdown. Nine diving schools in the United States are still pouring out graduates in spite of the decreased activity.

Sixth, the U.S. Navy's past efforts in diving have been the anchor around which our offshore commercial industry was built. Contrary to popular belief, the NOAA multimillion-dollar programs have not resulted in any meaningful technological improvement in commercial operations that we know of.

Seventh, there have been 10 fatalities in the past 9 years of domestic operations. When considering the thousands of hours of exposure, one has to conclude we have a relatively safe business. In the past, the fatality rate was exaggerated by a factor of 10 to justify a regulatory thrust into our industry. NOAA, in contrast has had two fatalities in the recent past, and if the seven additional fatalities in scientific diving, to which they have direct safety input through their MUST program, are included, you can begin to see our concern in having this agency tasked with the responsibility of doing studies that would evolve into additional regulations. I would like to point out enclosure 1.

Eighth, publicity released by some Federal agencies would have you believe that without expending vast sums to increase water depth capabilities, we will not be able to properly exploit our Continental Shelf. Most of the larger diving companies already have capabilities in excess of 1,000 feet. The U.S. Navy, NIH, and the diving industry have already done vastly more physiological research in diving than was done for the Apollo program to place man on the Moon. Did you know that there are more people doing research in diving than there are divers now working in U.S. offshore waters?

Ninth, existing regulations developed by the Coast Guard and OSHA—two separate regulations—have placed U.S. commercial diving in a position of being one of the most controlled industries in the United States, with a prognosis of dramatically increased regulations being promulgated in the near future. And I also like to point out enclosure 2 on Marshall's letter.

In concluding the identification section of our presentation, we must ask ourselves, why all this federal importance placed on diving. I will try to answer the question like this: There is a charisma about diving that lends itself to bureaucratic exploitation. By exaggerating the size, importance, and safety problems of our industry, certain agencies see for themselves a secure future in advancing a wet NASA concept. They know there is a built-in interest factor about diving that has popular appeal, thus making it much simpler to obtain support for projects in this area rather than the typical agency proposal that does not have a strong public interest. The present banner being waved is the critical role of the diver in the procurement of petroleum on our Continental Shelf. In reading some of the output from these agencies, one would conclude that the diver is singlehandedly responsible for oil and gas production offshore.

The offshore diving industry is highly concerned that NOAA, the lead agency for diving under 21(e) of the OCS Lands Act amendments, has held a series of meetings—six of them—in Washington and has unilaterally developed a study plan for diving without any industry participation and without even requesting from the industry as to what problems, if any, should be addressed. See enclosure 3.

NOAA has also chosen to ignore the monumental amount of diving research that has already been completed and has not taken into consideration the results of their own accident statistical study. It is obvious that if the full expertise of the offshore diving industry were brought to bear and the past research and statistical information were properly taken into consideration, NOAA might have to substantially reduce their efforts, thus delegating themselves to a minor role in undersea activities and virtually eliminating the future glory of a U.S. wet NASA. There is a real question within the offshore diving community as to NOAA's capability to direct diving studies under 21(e), as has been illustrated by their own inability to conduct simple shallow water diving operations as demonstrated by the *Helgeland* and the more recent New York Bight debacles that ended in two fatalities and one near miss. If the accounts we read of these accidents are true, and they hap-

pened to a commercial company, there would be many changes made, probably beginning right at the top.

OSHA, also aware of the charisma of diving and seeing a way to enlarge its areas of responsibilities, has been actively pursuing the expansion of its regulations without contacting the industry, studying the real causes of what few accidents there are, and continuing the threat of harassment at a time when a large segment of our industry is in a severe recession.

NIOSH, another Federal agency who participates on the NOAA study committee, is unilaterally committing funds for diving research without waiting for the NOAA plan to even be presented for public comment. To compound this indiscretion, they are in the process of letting two contracts on subjects that have already been adequately studied. The funding of these studies may be coming from the Department of Energy.

Now, our recommendations are as follows: Alternative 1: Direct the U.S. Coast Guard to take over the chairmanship of the 21(e) NOAA committee and instruct them to form a representative committee with industry playing a major role, with a strong assist from the U.S. Navy's various development and research groups that would insure that the objectives of safer operation and the technical advancement of the art and science of diving are addressed.

If the Coast Guard is unacceptable to the committee, the ADC would be happy to take over these responsibilities at no cost to the Government.

Alternative 2: Direct NOAA to restructure their committee and make it more representative—see enclosure 4 for the present committee makeup—by giving the various specialized diving groups—exploration, construction, pipeline, maintenance and inspection, equipment, physiological, and human factors research—and, most important, the users of services, a strong voice as to what programs, if any, should be initiated.

Our association will be happy to work with NOAA in the restructuring of their committee by submitting the names of knowledgeable and experienced people from all appropriate segments of the industry. We also request that you advise NOAA not to dilute industry's input by including other groups that have little or no activities on the OCS. There is also a question as to whether OSHA should sit on the committee, as they are strictly a regulatory agency with little knowledge of diving.

Direct OSHA to work with the offshore diving industry and see what regulations can be deleted in order to simplify our operations. This would, of course, be coordinated with the Coast Guard, as their regulations are very similar. OSHA must be reminded that its objective is not to promulgate regulations, but to create a safer environment in the workplace.

Direct NIOSH to cease the expenditure of public funds on diving until such time as the objectives of 21(e) of the OCS bill have been identified and a balanced approach to solve critical problems, if any, that justify government studies in the field of diving have been developed.

In closing, Mr. Chairman, the U.S. offshore diving industry is unique in that nearly all of its executive leadership spent many

years as active divers during a period of dramatic change as the petroleum industry was moving offshore. It is shameful that this array of talent that put America in first place underwater is being totally ignored by an inexperienced group of bureaucrats that are claiming the right of control over our industry. It is our desire to see 21(e) implemented in a meaningful way and not be used as a tool of bureaucratic opportunism that results in a mockery being made of what was intended to help our industry.

Thank you, Mr. Chairman.

[The following was supplied for the record:]

[From Ocean Science News, Vol. 21, No. 5, Jan. 29, 1979]

A NOAA diver's death may lead to a long overdue revamping of the diving organization of the Natl. Oceanic & Atmospheric Administration, insiders tell OSN. The administration of the training and medical programs, and the relationship of diving operations throughout NOAA to the Manned Undersea Science & Technology Office, are at stake. Critics inside the agency are speaking out now because they fear a series of recommendations made by a special Board of Inquiry may be gathering dust on the desk of Associate Administrator George Benton. On the other hand, Benton is under pressure from some of those most closely connected with the status quo to do nothing, other than to make a few cosmetic changes in NOAA diving procedures.

The first and only NOAA diving fatality occurred Mar. 29, 1978. Douglas Fewer, an oiler and diver from the NOAA ship *George B. Kelez*, was picking up an instrumentation cage from the New York Bight area in 47 ft. of water when he disappeared, according to the NOAA accident report. Visibility was 3-4 ft. He was accompanied by Richard Rutkowski of the Atlantic Oceanographic & Meteorological Laboratory in Miami, by reputation one of NOAA's best divers. Fewer surfaced, with his weight belt missing, and "in some difficulty," according to the report. "Foam * * * (was) issuing from his mouth and nose." Picked up by a U.S. Coast Guard cutter and flown by Air Force helicopter to New London CT (where a recompression chamber is located), Fewer was pronounced dead on arrival.

The Board of Inquiry was not ordered until May 30. Headed by Capt. (NOAA Corps) Roger Lanier, special assistant to Rear Admiral (Corps) Allen Powell, the head of NOAA's Natl. Ocean Survey, the board forwarded its report to Benton Aug. 18, 1978. It has never been made public. The members of the board included: John Callahan, a NOAA Corps officer attached to the NOAA general counsel's office; Paul Selfon, M.D., the medical director for the Dept. of Commerce, and the chairman of the NOAA Diving Medical Review Board; William Nicholson, associate director for marine technology at NOAA; and Richard Cooper, diving officer of the Natl. Marine Fisheries Service, stationed at Woods Hole MA.

When OSN inquired about the board's report a second time, it was made available by Benton. It was only then that OSN learned officially that the board's work was in two parts. OSN was given only the first portion which covers the accident itself, and which makes a couple of very specific recommendations about NOAA diving practices. The second portion of the report, Benton told an OSN reporter, was still "an internal document," because it made recommendations about NOAA's diving "for the longer term." That portion of the report (which makes recommendations about NOAA's organization, training, operations, medical procedures, and diving practices), Benton said, was still "under review" within NOAA. He said that he had only received it a "couple of weeks ago," and that he wanted "our own people to see it." He meant, he said, that the recommendations had come "from one side of the organization" of NOAA and that he wanted it seen "by all concerned." Benton requested this second portion of the report from the special board on May 30.

Other NOAA sources indicate that the second part of the report left Powell's shop no later than October. It apparently traveled a circuitous route through the agency before it landed on Benton's desk. OSN has been unable to determine exactly how many hands it passed through, but there is a suspicion on the part of some of OSN's sources that there was an attempt to bury it before it reached Benton. Others say everyone recognized that the report would surface inevitably but that some people were able to gain more time within which they could work to blunt its impact. That Benton publicly says it still needs more reviewing inside NOAA concerns these people very much.

Those who oppose any drastic changes in NOAA diving argue that to pull the existing organization apart and attach it, for example, to Benton's own office, isn't necessary despite the fact that NOAA diving operations are carried on throughout

the agency, particularly by the Natl. Marine Fisheries Service, the Environmental Research Laboratories, and the Natl. Ocean Survey. They believe that the MUST office (which is part of the Office of Ocean Engineering but pretty much has a free hand) can be responsible for diver training and safety despite its other missions, including the follow-on to the old Oceanlab project, Hydrolab (the habitat in the Virgin Islands enjoyed by a few research scientists and a congressman on occasion), and its coordination work with Navy diving research. They argue too that the NOAA diving coordinator is not under any particular financial restraint, even though he is part of MUST. (Indirectly, Diving Coordinator J. Morgan Wells is responsible for over 400 NOAA divers, although MUST has no diving programs of its own.) These people also see no problems with the present organizational setup which finds Wells and other diving operations people reporting to MUST chief Donald Beaumariage, who reports to Steven Anastasion, head of the Office of Ocean Engineering. That office in turn reports to NOAA Asst. Administrator for Research & Development Ferris Webster.

Another point is made by the defenders of the status quo: Because this is "the first time ever" NOAA diving has been thoroughly reviewed, the old hands should have their chance to straighten things out for themselves, if there really are problems. Some of the recommendations for change, they argue, are just a matter of getting more dollars and personnel into NOAA diving, particularly MUST, and those decisions are made at the top, and are not really the province of a board originally constituted to investigate the death of a diver.

The accident investigation report provided by Benton to OSN concluded that Fewer "suffered an apparent air embolism and died." Fewer was certified as "a limited NOAA diver after completing a two-week training course" three months earlier. The board rated him "relatively inexperienced," having made only one logged dive since his training course. He had one hour's experience in a swimming pool with the variable volume dry suit he was wearing. In an earlier dive on the day of his death, Fewer was criticized by his partner, Rutkowski, for failing to follow the dive plan. The board concluded that Fewer came to the surface too rapidly, failing "to sufficiently vent the air in his lungs * * *." The rapid ascent was caused by the loss of the weight belt, and "diver error."

But, the board added, " * * * in two areas, judgment was exercised by personnel other than the diver, which points out the need for regulations which would help to prevent a repetition of circumstances which could lead to similar incidents." The board faults the decision to allow the inexperienced diver to use a variable volume suit, as well as the failure "to provide for constant contact by physical or visual means during a working dive with an inexperienced diver under conditions of reduced visibility."

The board reported that the type of error made by Fewer is not restricted to inexperienced divers. Similar incidents have occurred "with the most experienced divers," it contended. The board added that "present NOAA regulations * * * insure that personnel qualified * * * know proper procedures" but that NOAA can't "insure that individuals will carry these out in new, unusual, or difficult situations." The board did not explain how the Fewer situation was "new, unusual, or difficult."

The board did agree, however, that "variable volume suits should not be used by inexperienced divers * * *" and noted that NOAA's regulations "do not cover the use of variable volume suits with respect to minimum qualifications, checkouts, etc." The board reported that Rutkowski (a NOAA diving instructor) accepted Fewer's word that he was able to use the suit, Crux: "In view of this fatality and subsequent inquiry, the board feels * * * the level of protection against self-inflicted error * * * must be raised."

While the board determined on the basis of conversations with Fewer's diving instructors that he had completed the 15 open water dives which are required to qualify as a "limited diver" at NOAA, Fewer's diving log did not show the 15. The board suggested that "it is not uncommon during training, when the trainees are kept very busy and logging each individual dive is difficult, for several dives to be logged as a single dive * * * Interviews with NOAA divers with varying levels of experience revealed that many of them do not log every dive." This first portion of the board's report recommended that NOAA's diving regulations be amended to prohibit "the use of variable volume suits except where the diver has had a minimum of three hours training in the use of the particular variable volume suit, two hours of which must be in open water." The diver must also be a "NOAA unlimited diver" or have had a personal checkout by a "NOAA unit diving officer." The board also recommended that consideration be given to requiring the use of buddy lines between divers when visibility is less than four ft. and one of the divers is a trainee. It also suggested that diving logs should be kept.

OSN has also obtained (through unofficial channels) a copy of the second portion of the board's report—the long-term recommendations, at least some of which are being heartily resisted by the NOAA personnel most directly involved. This portion of the report is based on three months of meetings and interviews with divers and non-divers from Alaska to Miami to Woods Hole. The review, incidentally, does not take up saturation or mixed gas diving, but deals with scuba diving with compressed air only.

The board found "certain standards, policies and practices that should be revised to reduce the risk of future accidents." The recommendations are specifically:

"The NOAA diving coordinator functions of training and safety should be transferred out of the MUST office."

"The training and safety functions of the NOAA diving coordinator should be under the control of a NOAA official having cognizance over major program elements in which divers work." The board recommended that the proper level for this sort of control would be the level of the NOAA associate administrator—i.e., Benton.

"A unit responsible for diving safety and training should be composed of (a) a person responsible for the training and safety functions formerly held by the NOAA diving coordinator, reporting directly to the associate administrator;" and (b) should have one assistant for both the east and west coasts plus secretarial help. The head of the unit would be formally designated the "NOAA Diving Program Coordinator," and would be located in Washington DC, as would his east coast assistant. The west coast assistant would be located in either Alaska or Seattle.

Diving unit officers would report to their east or west coast representatives "concerning matters of training and safety." Major program element officers (NMFS, for example) would report, "and consult with, the NOAA Diving Program Coordinator concerning policy and operational considerations peculiar to the major program element."

Separate funding should be sought for NOAA's training and safety functions, including on site inspection. These funds would be "earmarked" for these purposes in the diving program coordinator's office. (This is one of the crucial points in the board's recommendations. OSN is told that within the MUST office diving often loses out to more politically favored activities.)

The program coordinator would publish "relevant educational and safety-related material" on a timely basis.

Screening procedures should be established for the selection of candidates for the NOAA diver training program. Some of NOAA's divers receive only "rudimentary" screening, according to the report. Some candidates for training have not even possessed the ability to swim "or were otherwise poorly qualified * * *" says the report, although recently "better initial screening has eliminated the obviously unqualified." The board also pointed out that "while the two-week course meets the need for training of divers for the NOAA fleet," the course is not adequate "for many of the working diver units." It did not, however, recommend any changes in the course.

Specific training in cold water and/or low visibility should be required.

Refresher courses and specialized training in new equipment and techniques should be provided for NOAA divers.

NOAA field administrators should be encouraged by NOAA headquarters to allow "sufficient time and money * * *" for divers to meet proficiency requirements and take specialized training or refresher courses.

Field diving supervisors should be given special training in diving supervision.

Each NOAA vessel whose cruise plan calls for diving should have a properly trained diving officer aboard. Shore-based diving activities should have a diving officer present where three or more divers are involved. NOAA vessels with "a programmed need" for diving should have at least four divers on board. NOAA vessel diving requirements should be reviewed.

A "diver pool" should be formed of highly experienced and specialized personnel. ("Lack of experience, insufficient training, and insufficient numbers of divers were the three most commonly heard complaints" when the board visited NOAA installations. There was "general unawareness on the part of the laboratory directors and vessel captains of the minimal requirements for conducting diving operations from an ocean-going vessel," added the board. The diver pool would probably take some time to build up, it suggested, because of the lack of competent divers in NOAA, or for fear of stripping some organizations of their best divers. Apparently, the pool would be secondary to any individual organization's needs.)

Divers with limited capabilities should be placed in two categories, the lower of which would preclude working dives unless the diver was supervised on a one-to-one

basis. The board also suggested that the maximum period of activity now permitted before certifications lapse should be reviewed.

A minimum of two meetings a year should be held of the NOAA Diving Medical Review Board. The first should be at a diving training site and the second should be in conjunction with the annual meeting of the NOAA Diving Safety Board. The medical board was established in 1974, notes the report, but it has never met—carrying on its activities by telephone and the mail. "Effective interaction among the physicians of the Medical Review Board and the resolution of complex medical problems cannot be satisfactorily accomplished by telephone calls and mail correspondence," comments the report.

Initial cardiopulmonary resuscitation training and first-aid training should be mandatory for diving certification. The Board of Inquiry's report states flatly that "at each diving site visited . . . there was serious concern expressed by some NOAA diving personnel concerning the adequacy of diver-oriented first aid training and CPR training." The report also recommends diver physical conditioning programs.

The presence of adequately trained medical personnel for recompression chambers should be required. The report says that "some" NOAA chambers are not in a state of readiness.

The NOAA Diving Safety Board should "examine and establish a NOAA policy concerning the use of buoyancy compensator vests with variable volume suits" and the type of weight belt to be used with such suits.

The board's report makes it very clear that "due to the many responsibilities of the MUST office and personnel limitations, the NOAA diving coordinator (Wells) cannot devote sufficient time to training and safety. A good deal of his time is spent traveling and working on various MUST programs. This results in a backlog of training and safety paperwork which cannot be accomplished . . . Problem areas include processing of diving physicals, documentation of diver qualifications and experience, and dissemination of diving information on training and safety. Additionally, little time is spent checking diving units for compliance with diving regulations." The report concludes that "as long as the diving coordinator is tasked with MUST projects, the priority of these projects will continue to detract from the time necessary to run an effective training and safety program for divers . . ." Nowhere does the report indicate Wells is in any way at fault. Rather it implies that Wells' superiors need to be reminded that he has a responsibility for the lives of NOAA's divers he is not being allowed to meet.

Statistics on nonprofessional diving deaths in the U.S. show a rise in fatal accidents from 131 in 1975 to 147 in 1976. The previous high was 144 in 1974. The report, "U.S. Underwater Diving Fatality Statistics, 1976," was done for the Natl. Oceanic & Atmospheric Administration and the U.S. Coast Guard by the Univ. of Rhode Island's John J. Schenck Jr. and John J. McAniff. It is an annual report, and generally regarded as the best survey available, although it may not be complete. The latest report followed a major revision in its counting system, the authors reported. A "more rigorous definition" is provided than was used before. Covering the period 1970-76, the previously-used classification of semi-professional scuba diver has been eliminated, "because it is almost impossible to define accurately." While the report focuses on sport and recreational diving fatalities, a section on professional, occupational and commercial fatalities also is included. All underwater fatalities for 1976 totaled 175, compared with 161 in 1975. The high was 187 in 1974.

Among states, Florida recorded the highest nonprofessional death toll at 40, equal to the previous year's, but lower than the high in 1974 of 42. California followed with 23, up from 17 in 1975 but down from the 36 and 32 set in 1974 and 1973 respectively. Deaths in Hawaii increased to 11 from six in 1975. Of the 1976 total, 137 were men and 10 were women. Most of the deaths occurred as a result of following improper procedures, according to the URI study, or from taking unnecessary risks. A lack of training was not singled out as a cause of accidents, nor was the failure of equipment—although at least one manufacturer recently recalled some of his equipment so the possibility for such failures among nonprofessional divers must exist. The report is available from NOAA's Manned Undersea Science & Technology Office, or the USCG's Office of Merchant Marine Safety.

[From Ocean Science News, Vol. 17, No. 39, Sept. 26, 1975]

Tragedy has visited NOAA's saturation diving fisheries study in the German habitat Helgoland, moored 100 ft. down on the bottom of the Gulf of Maine 8.5 miles off Rockport MA. Veteran German diver Joachim Wendler, 36, was pronounced dead yesterday (25 Sep.) after emergency treatment in a portable recompression chamber at dive headquarters in the Ralph Waldo Emerson Inn in Rockport. Wendler and two other employees of the German firm GKSS, which operates the

large and advanced habitat, had entered Helgoland on 19 Sep. On 22 Sep. they were joined by Lt. Cdr. Laurence Bussey, USN, head of the Natl. Oceanic & Atmos. Admin. project and Roger Clifford, a fisheries scientist from NOAA's Woods Hole lab. Their breathing gas was a "normoxic" mixture of oxygen and nitrogen, a development also used by NOAA in its recent project SCORE dive in the Bahamas (OSN 16 May). Wendler, Bussey, and another German, Joachim Rediske, shortly began decompression in the habitat. They reached one atmosphere at 6:30 p.m. Wednesday (24 Sep.), but waited for daylight before swimming to the surface at 11:30 a.m. Thursday. On reaching the surface, Wendler clung to a buoy, waving for help. He was rushed to the chamber at Rockport and recompressed to 165 ft. After two hours in the chamber, attended by Anthony Low (M.D.), the GKSS medical supervisor, he was pronounced dead. NOAA has convened board of inquiry, headed by J. Morgan Wells of the Manned Undersea Science & Technology office (MUST) to determine what went wrong and decide on the study's future course, which was to include a bounce dive to the habitat by two members of Congress (OSN, 19 Sep.). Two divers remain in Helgoland, Clifford and GKSS chief diver Hans Belau.

[From Ocean Science News, Vol. 17, No. 40, Oct. 3, 1975]

German diver Joachim Wendler died of an air embolism, apparently incurred as he ascended the 104 ft. from the Helgoland habitat to the surface Sept. 25, according to the preliminary autopsy report. Wendler was pulled from the water at about 11:30 a.m. and given oxygen, mouth-to-mouth resuscitation, and external heart massage aboard the 50-ft. diving tender boat on the way to the wharf at Rockport MA (OSN, Sept. 26). The trip to the recompression chamber at Rockport took about 1½ hours. the Natl. Oceanic & Atmospheric Administration Diving Manual notes that immediate recompression to 165 ft. is the only treatment for air embolism.

Accordingly, among the new rules for continuation of the saturation diving fishery study, number one is: "a recompression chamber must be available at the diving site (i.e., on the boat at the surface) during all diving operations." The five rules were ordered by NOAA Associate Administrator David Wallace after receiving the oral report of the board of investigation. The board, headed by J. Morgan Wells of NOAA's Manned Undersea Science & Technology (MUST) office, told Wallace that Wendler's death "was in no way connected with the systems in the habitat or the decompression procedures use." Wallace's other directives provide that a small recovery boat be available at the site at all times and an on-site operational safety officer be designated.

U.S. DEPARTMENT OF LABOR,
OFFICE OF THE SECRETARY,
Washington, D.C.

Hon. BROCK ADAMS,
Secretary, Department of Transportation,
Washington, D.C.

DEAR BROCK: The Occupational Safety and Health Administration (OSHA) welcomes the opportunity to aid in the implementation of the Outer Continental Shelf (OCS) Lands Act Amendments of 1978. Two paragraphs of the amendments mandate studies related to employee safety and health. Section 21(a) of that Act calls for the Secretary of Interior and the Secretary of the Department in which the Coast Guard is operating to initiate a cooperative study in consultation with the heads of other concerned Federal agencies on the adequacy of existing safety and health regulations on the OCS; section 21(e) explicitly directs the Secretary of Commerce, in cooperation with the Secretary of Transportation and the Director of the National Institute for Occupational Safety and Health (NIOSH), to conduct studies of underwater diving techniques and equipment. As one of the concerned agencies, OSHA has views which it would like to share concerning these studies.

Since August 1975, when the AFL-CIO presented a petition to OSHA claiming a situation of grave danger existed within the diving industry, the agency has been deeply involved in studying and regulating diving hazards. On June 15, 1976, OSHA issued an Emergency Temporary Standard for Commercial Diving Operations (41 FR 24272); on November 5, 1976, a Notice of Proposed Rulemaking (41 FR 48950); and on July 22, 1977, a final diving standard (42 FR 37650). An examination of the available literature and the information collected in hearings held prior to promulgation of the final standard has enabled us to isolate several issues where further study would likely lead either to the promulgation of additional provisions for currently unregulated diving hazards or to the updating of the current standard to

reflect new knowledge and practices. We present these issues as problem areas which the studies mandated in sections 21(a) and (e) could address, but particularly that of section 21(e).

Our suggestions are aimed at achieving four goals: alleviating the dangers associated with decompressing divers, improving diving equipment, improving the breathing gas mixtures currently in use, and developing better emergency procedures. The basic information needed for achieving these goals will come from a proposed epidemiological study which would provide comprehensive data on all hazards which divers face. We are discussing with NIOSH the prospects of doing such a study.

DANGERS ASSOCIATED WITH DECOMPRESSING DIVERS

Decompression sickness is the most common hazard associated with decompressing divers. The best means for protecting divers from this hazard is to make sure that the decompression tables in use provide acceptable levels of safety for the environment of the dive. Our efforts towards developing a method of reviewing these tables were hindered by trade secret problems. We highly recommend that you study the possibility of developing criteria for judging the appropriateness of the decompression tables in use.

A necessary complement to the development of review criteria for decompression tables will be a study to determine criteria for modifying the tables for cases where decompression sickness occurs. The proper completion of these two studies could lead to requirements mandating the steady improvement of decompression tables.

Research into the exact causes of decompression sickness and emboli would also be helpful in combatting these hazards. If the controversy surrounding the causes of these two conditions could be resolved, it might be possible to take better remedial and preventive measures.

The most serious chronic ailment associated with decompression is dysbaric osteonecrosis. We were unable in our standard to prescribe either preventive or remedial measures, for we found in the hearing record no consensus among the experts on the proper steps to be taken. We, therefore, recommend a long-term study of the causes and possible treatments of dysbaric osteonecrosis, and the development of criteria to determine whether afflicted divers should be allowed to dive, or if allowed, what special precautions must be taken.

Currently, Scuba diving below 130 feet of sea water (fsw) is forbidden, and there is controversy over whether decompression Scuba diving should be allowed. Recent tests of the National Oceanographic and Atmospheric Administration (NOAA) suggest that decompression-Scuba diving at depths significantly greater than 130 fsw might be done safely. This study should be pursued further with particular attention given to the effects of environmental and task-level factors on the abilities of divers to withstand higher pressures.

EQUIPMENT IMPROVEMENT

The requirements on the equipment used in dives is stringent in both the OSHA and the CG standards, but we perceive two areas needing improvement in the present standards and one practice, the so-called "Hookah" diving, which has gone unregulated. "Hookah" diving has resulted in several fatalities off the northwest coast of the U.S. The various techniques employed in these operations need to be surveyed, and regulations which insure acceptably safe conditions for all divers need to be promulgated.

The two areas needing improvement involve the standards for reserve gas supplies for Scuba divers and helmets for surface-supplied divers. In both cases, the standards are quite general and need to be more specific. Research could lead to better correlation between the design of these pieces of equipment, the various environments they are used in, and the various tasks their users do.

BREATHING MIXTURE IMPROVEMENT

Two recent series of experiments with breathing mixtures have produced results which raise the possibility of diving deeper with adequate safety. NOAA's experiments on nitrogen/oxygen breathing mixtures show that certain mixtures might be used at deeper depths for longer times without increasing the level of nitrogen narcosis. The ability to use nitrogen at lower depths would allow divers to circumvent the problems inherent in helium such as increased susceptibility to hypothermia and changes in voice timbre.

The U.S. Navy and Duke University have studied using higher partial pressures of oxygen in breathing mixtures. If the oxygen pressure could be increased without increasing the danger of oxygen poisoning, divers might be less susceptible to

decompression sickness, less susceptible to disorientation, and quicker in their reactions to brain impulses. Both lines of investigation merit further study, for their successful conclusion could grant the diving industry greater latitude in selecting diving methods without compromising worker safety.

EMERGENCY PROCEDURES DEVELOPMENT

Emergency procedures need to be tightened in both the OSHA and CG standards. The standards require that a physician experienced in hyperbaric medicine be on call during dives, but there is no institutionally-established medical subspecialty of hyperbaric medicine. Methods for qualifying physicians for examining and treating divers need to be developed. The standards require that a bag-type manual resuscitator be available at diving sites, but more research is needed to determine whether this is the definitive means of artificial respiration. The standards require a first aid kit "appropriate for the dive" to be at the diving site, but no specifications are given as to what is appropriate even for hyperbaric conditions. We feel that research is needed into developing criteria for qualifying physicians for treating divers, into determining the best means of artificial respiration for divers, and into the specific requirements for a first aid kit that would be effective under hyperbaric conditions.

We hope you find the above points useful in conducting the diving study which section 21(e) mandates. We will be glad to answer any questions you may have on these issues. The U.S. Air Force School of Aerospace Medicine also has expertise in some of these areas and we suggest you consider them as another concerned Federal agency for assistance in the study.

At a later date, we will supply information which we feel should be included in the study of other existing regulations called for in section 21(a). We look forward to working closely with you as both of these studies progress.

Sincerely,

RAY F. MARSHALL, *Secretary.*

PROGRAM DEVELOPMENT PLAN

for

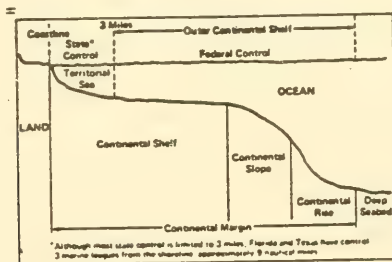
Studies of Underwater Diving Techniques and Equipment
Suitable for Protection of Human Safety and
Improvement of Diver Performance

Outer Continental Shelf Lands Act Amendments of 1978
Section 21(e) of Section 208 of Title II
Public Law 95-372
September 18, 1978

I. Purpose

The Outer Continental Shelf Lands Act Amendments of 1978 was signed into law "to establish a policy for the management of oil and natural gas in the Outer Continental Shelf; to protect the marine and coastal environment; to amend the Outer Continental Shelf Lands Act; and for other purposes."

The "Outer Continental Shelf" as used in this Act means that portion of the continental margin lying beyond state boundaries within U.S. federal jurisdiction. The continental margin consists of the continental shelf, the continental slope, and the continental rise. Bounding the continental margin is the land (continent) on one side, and the deep seabed on the other (See Figure below). A more specific definition of the Outer Continental Shelf (OCS) is difficult because the legal meaning of the term continental shelf is inconsistent with the general scientific meaning, i.e., variations in the state jurisdiction (some states have 3 mile limits while others have 3 marine league limits), depth of water, and location and classification of shelf resources.



The purposes of the Act are to:

(1) establish policies and procedures for managing the oil and natural gas resources of the Outer Continental Shelf which are intended to result in expedited exploration and development of the Outer Continental Shelf in order to achieve national economic and energy policy goals, assure national security, reduce dependence on foreign sources, and maintain a favorable balance of payments in world trade;

(2) preserve, protect, and develop oil and natural gas resources in the Outer Continental Shelf in a manner which is consistent with the need (A) to make such resources available to meet the Nation's energy needs as rapidly as possible, (B) to balance orderly energy resource development with protection of the human, marine, and coastal environments, (C) to insure the public a fair and equitable return on the resources of the Outer Continental shelf; and (D) to preserve and maintain free enterprise competition;

(3) encourage development of new and improved technology for energy resource production which will eliminate or minimize risk of damage to the human, marine, and coastal environment;

(4) provide States, and through States, local governments, which are impacted by Outer Continental Shelf oil and gas exploration, development, and production with comprehensive assistance in order to anticipate and plan for such impact, and thereby to assure adequate protection of the human environment;

(5) assure that States, and through States, local governments, have timely access to information regarding activities on the Outer Continental Shelf, and opportunity to review and comment on decisions relating to such activities, in order to anticipate, ameliorate, and plan for the impacts of such activities;

(6) assure that States, and through States, local governments, which are directly affected by exploration, development, and production of oil and natural gas are provided an opportunity to participate in policy and planning decisions relating to management of the resources of the Outer Continental Shelf;

(7) minimize or eliminate conflicts between the exploration, development, and production of oil and natural gas, and the recovery of other resources such as fish and shellfish;

(8) establish an oilspill liability fund to pay for the prompt removal of any oil spilled or discharged as a result of activities on the Outer Continental Shelf and for any damages to public or private interests caused by such spills or discharges;

(9) insure that the extent of oil and natural gas resources of the Outer Continental Shelf is assessed at the earliest practicable time; and

(10) establish a fishermen's contingency fund to pay for damages to commercial fishing vessels and gear due to Outer Continental Shelf activities.

Section 21 of the Act establishes procedures for study, review, coordination, and if necessary, revision of safety regulations to promote safety and health in the exploration, development, and production of the minerals of the Outer Continental Shelf. Section 21(e) states--

The Secretary of Commerce, in cooperation with the Secretary of the Department in which the Coast Guard is operating, and the Director of the National Institute for Occupational Safety and Health, shall conduct studies of underwater diving techniques and equipment suitable for protection of human safety and improvement of diver performance. Such studies shall include, but not be limited to, decompression and excursion table development and improvement and all aspects of diver physiological restraints and protective gear for exposure to hostile environments.

This Program Development Plan (PDP) is being developed specifically in response to this section of the Act. With the assistance of other designated agencies, the Department of Commerce (NOAA) is developing this study program designed to increase diver effectiveness, improve operational safety, and reduce those safety and health hazards associated with diving operations on the Outer Continental Shelf.

II. Background

The vast majority of all U.S. commercial diving activities prior to 1960 were conducted in shallow waters (i.e., the inland waters, harbors, and sheltered coastal waters) for construction, repair, and salvage work. Inland and harbor diving is limited in depth by geography as well as by the work to be performed. The majority of inland and harbor diving occurs at depths less than 100 feet of seawater (fsw).

The first offshore drilling platform was in the Ellwood Field, off Santa Barbara, California, in 1924. The next offshore development occurred in 1947 when a 1,200 ton structure was erected in 20 feet of water in the Gulf of Mexico.

By 1970 energy requirements and developing technology resulted in the installation of a 7,000 ton platform in 373 feet of water in the Gulf of Mexico. In January 1978 there were 364 manned platforms, 2168 fixed structures of all types, 1200 supply and support vessels, 105 mobile drilling units, 175 separate diving operations, 46 construction and pipe-lay barges and over 27,000 individuals working on the Outer Continental Shelf of the United States. Today, approximately 2,300 fixed structures and 150 mobile offshore drilling units exist in the Gulf of Mexico under the jurisdiction of the U.S. Coast Guard and the Department of Interior.

Since 1960, commercial diving activities have utilized several breathing mixtures, in addition to air to permit work at greater depths. The offshore diver does not have, because of geography, as severe a depth limitation as does the inland and harbor diver and may work at depths in excess of 1,000 fsw, with the majority of the diving activity occurring between the surface and a depth of 500 fsw. Technology has advanced sufficiently to enable working dives at depths in excess of 1,000 fsw. Divers are utilized extensively in most phases of the offshore energy industry -- exploration, construction, production, pipeline transportation, and maintenance. Based on national energy needs and the current trend in offshore oil exploration, deeper and longer working dives can be anticipated.

At present there is a wide diversity in the quality, quantity, and direction of research being applied to the needs of the divers working on the Outer Continental Shelf. Although the U.S. Navy has had and continues to have an important role in the development of equipment and procedures designed to support manned underwater activities, the U.S. Navy activities are limited to Navy military missions and therefore Navy research efforts must remain germane to their operational requirements.

In response to the new statutory requirement for federally directed and supported research and development for equipment and procedures that support diving operations on the Outer Continental Shelf, the Department of Commerce is developing this program. The Program Development Plan (PDP) is being designed

to increase diver effectiveness, improve operational safety, and reduce hazardous working conditions associated with diving operations on the Outer Continental Shelf.

Surface supplied (umbilical) diving is more common than scuba (self-contained) diving for Outer Continental Shelf commercial operations. This method involves supplying the diver with a breathing medium, either air or mixed-gas, through a hose and other necessary life support measures, as necessary, from a remote source located at the surface. Surface supplied diving allows monitoring of the working diver, who is tethered by and in communication with the surface control.

When a dive is lengthy or particularly deep, the use of a diving bell may be appropriate. A diving bell is a device which allows the diver to be transported to and from the underwater worksite.

Mixed-gas diving is carried out with a breathing medium consisting of oxygen and an inert gas or gases such as helium or nitrogen. In Outer Continental Shelf and offshore mixed-gas diving, a helium and oxygen mixture is most commonly used. Commercial mixed-gas operations usually involve surface supplied diving and may utilize a closed bell and saturation diving techniques.

Saturation diving is when the body tissues become saturated with the inert gas or gases in the breathing medium. Saturation diving is used in situations where the diver will be exposed for long periods of time to elevated (high ambient) pressure conditions. The advantage of saturation diving is that once the body tissues become saturated with the inert gas or gases at any given depth, no additional decompression is needed regardless of the length of time of the diver's exposure to the elevated pressure.

III. Organization and Participants

In accordance with Section 21 of Section 208, of Title II, paragraph (e) of the Act, this program has been developed by representatives of the three lead agencies, National Oceanic and Atmospheric Administration (NOAA), Coast Guard, and the National Institute for Occupational Safety and Health (NIOSH), with the assistance of the Navy, the Occupational Safety and Health Administration (OSHA), National Heart, Lung and Blood Institute, Department of Interior, and the Department of Energy.

In addition to federal agency representation, the industrial and scientific communities have contributed to the development of the plan to ensure that the needs of the working diver are met. The process by which the above was achieved was to hold a series of planning meetings involving the lead agencies, which were expanded early to include the other appropriate federal agencies, as cited above.

This plan could not be developed properly without the cooperation of and contribution from the commercial diving and academic communities. Their representatives were given an opportunity to review the preliminary draft and were invited to participate in a public forum sponsored by NOAA, the Coast Guard, and the NIOSH, with the assistance of the Undersea Medical Society and the Marine Technology Society. This forum afforded them an opportunity to discuss and modify the program so that it could be optimally responsive to the intent of the Act.

IV. Approach

The overall goal of this program is to "conduct studies of underwater diving techniques and equipment suitable for protection of human safety and improvement of diver performance." This goal can be achieved only with the cooperation and support of the appropriate federal agencies, and those organizations and persons involved in the diving industry.

In proceeding with the program development, basic premises which were agreed upon are:

- Every effort will be made to utilize information from both national and international sources in the planning and implementation of this program.
- The program will be responsive to the needs of the working and scientific diver on the OCS
- The program will be national in scope
- Where research facilities are required existing facilities will be utilized
- Federal and non-federal facilities will be used as appropriate
- Funds will not be sought for the purpose of constructing new hyperbaric facilities
- Funds will be made available to federal and non-federal organizations to aid in solving selected immediate and long range needs.

- Proprietary information, so identified, will be safeguarded

V. General Objectives

The following four objectives are really categories into which the proposed programs have been placed. Elements of each category are needed in order to have an adequate total program. Research and development efforts will be coordinated closely among those organizations already engaged in supporting these areas, such as NOAA, the Navy, the National Institute of Health (NIH), private foundations, and industrial organizations. The order in which the objectives are presented is not intended to imply a priority and should not be construed as such.

A. Procedures

Emphasis will be on the responsiveness of routine procedures in the event of an emergency or life-threatening situation. The type of equipment used will have an important relationship to the procedures involved. Procedural research addressed will relate primarily to those factors concerned with the safety and health of divers.

- Example areas of concern are: communications, diving bell recompression chamber mating, evacuation of offshore platforms, medical procedures, and assignment of responsibilities during emergencies.

B. Equipment

Within the present context, equipment is defined as that which is supportive of diving operations from a medical and operational safety standpoint. The diving industry has made great strides in developing personal support equipment such as diving helmets, regulators and umbilical hoses, and is continuing such efforts as required by real world diving operations. It is more difficult, however, for industry to support the development of basic technology and standardization leading to long range improvement in equipment systems. Studies are needed, therefore, to obtain further information and for recommending minimum requirements for the safe operation (including failure and backup) of all equipment supporting divers.

C. Training

The procedures for selecting and training divers and support personnel should be designed not only to provide qualified individuals but also to anticipate future skill requirements. Considering the rapid technological advances being made in the field of diving, it is essential that training and retraining programs be developed that respond rapidly to such advances

with respect to both equipment and procedures.

Areas in which training is required include divers, tenders, specialist support personnel, hyperbaric physicians, emergency medical technician/divers, and supervisors.

Funding will be provided for research directed towards developing curricula for the purpose of initiating the most effective training procedures to produce efficient and productive divers and support personnel and to minimize risk with respect to safety and health.

D. Biomedical and Diver Performance

The biomedical program will address problems of both an immediate and long range nature. Examples of specific research areas are those involving basic mechanisms such as the underlying causes of decompression sickness, bubble formation in living tissue and oxygen toxicity. Long range health problems and treatment procedures need to be identified. Studies of more immediate problems will result in increased understanding of human physiology, improved hyperbaric medical procedures, saturation diving procedures, data management, and the development of specific decompression schedules. Human engineering studies are needed to improve performance by refining the design of equipment to better match the physiological and psychomotor skills of the diver. Handbooks reflecting the results of such efforts will be compiled and published.

In 1974, NIOSH formed a Federal Diving Task Force in an effort to coordinate the national diving community and to prioritize its principal needs with respect to occupational safety and health. The final report (National Plan for the Safety and Health of Divers in their Quest for Subsea Energy,") was published by the Undersea Medical Society in January 1976. Since that time Federal diving regulations have been promulgated by OSHA in July 1977, and the Coast Guard in November 1978. The "National Plan" primarily addressed biomedical considerations and will be used as a reference document during the development of the current PDP.

IV. Research and Development Programs

The research and development programs which are described do not in any way reflect an exhaustive list. They are based on recommendations by numerous individuals and on previous documents and articles. The programs are not listed in order of priority. Priorities will be established following considera-

tion of comments and reviews by both federal and non-federal organizations.

A. Procedures Program

Experience in the North Sea has shown the desirability to have a capability to evacuate diving and non-diving personnel from offshore platforms in the event of emergencies. If a diver is under pressure during an emergency requiring evacuation, the situation is further complicated. It may be necessary to provide a system capable of keeping a diver under pressure continuously during transit from an offshore location to a treatment center. Such a system requires standard mating flanges, and procedures and a closely coordinated communication and transportation system. A study is needed to identify the necessary elements in this system.

B. Equipment Program

As stated in Section V-B, the emphasis here will be on the safety and operational aspects of equipment support systems rather than on the development or refinement of personal equipment items. Examples of such studies are:

Environmental Effects

- The long range effects of adverse elements of the marine environment such as salt water, pollutants, wave action, and oil on life support systems components.

Performance Standards

- A review of equipment performance standards.

Equipment Interface

- The requirements for interfacing equipment components such as diving bells, recompression chambers, and their relation to emergency evacuation procedures.

Handling Gear

- This program will involve the review of basic criteria and the recommendations for safe load requirements for primary and backup handling systems. The capabilities of retrieval systems will be evaluated including electro-hydraulic, air, mechanical and other systems with respect to extreme heat and cold, viscosity of fluids and oils in extreme temperatures, and the effects of external pressure on system components.

Breathing Gas Systems

- Review existing standards and recommended minimum safe requirements for design, cleaning, inspection, gas filtration, manifold, and filling of breathing gas containers. The wide differences which now exist create difficulty in achieving uniform safety practices.

C. Training Program

Curricula

- Specialist Training: The complexity of technology in the field of diving is increasing continually. On the assumption that this trend will continue there will be a need for a variety of specialized training for divers and diver support personnel. The selection of subjects for training will be made in cooperation with the diving industry and organized labor. The role of the federal government will be to assist in the development of the curricula and the establishment of the training programs but actual training will be carried out by non-federal organizations.
- A study comparing training techniques, curricula, length of course, training facilities and relative costs. This study also would include the determination of the needs for refresher training in many areas, an important element in a field as dynamic and changeable as diving.
- Emergency Medical Technician (Diving) EMTd: As in other areas, the demand for emergency medical training is increasing in the field of diving. Because of the impracticality of providing physicians on offshore facilities, there is a need to train selected diving personnel in the emergency medical care of diving casualties. While one or two organizations do offer such training, there is a need to develop criteria for establishing curricula resulting in a certifiable course that is recognized by the Department of Transportation on the same basis as other specialized courses in emergency medical care. In addition to providing basic training, it is important to establish a procedure to allow for retraining (refresher courses) in order to ensure the utilization of the most current techniques of emergency medical care and the maintenance of skills.

- Diving Physicians: An expansion of the current NOAA/Navy/Undersea Medical Society program for training physicians in diving medicine. The current program can handle only about 20 percent of the physicians who apply for such training. It is felt that federal support should continue for about 4-5 years, at which time the responsibility for such training can be assumed by non-federal organizations
- Training of Research Personnel: Development of a program to train scientists and engineers in the techniques of deep water diving and the use of the equipment involved. Such a program would be carried out with the cooperation of commercial diving training organizations. The investigations mandated under Section 20 of this Act requires that there exist a cadre of scientists and engineers capable of conducting research programs on the OCS.

D. Biomedical Program

This program has both basic and applied elements. The dual goals of providing answers to immediate problems plus the study of basic medical issues should assure the systematic improvement of diver effectiveness and at the same time minimize health hazards. It is recognized that the role of the diver is shifting as technology advances, and that in some instances there will continue to be engineering solutions to what historically have been biomedical problems, e.g., the one atmosphere diving system and/or remotely controlled manipulators. Examples of recommended biomedical programs are:

- Diving Accident Management: NOAA, in cooperation with the Undersea Medical Society, is in the process of establishing a national diving accident network. This network should permit the expeditious handling of diving accident victims using existing transportation systems and treatment centers. It also will facilitate the acquisition and dissemination of accident related information. A problem needing specific attention in this regard involves the proper examination of diving accident victims. The true cause of death in a pressure-related accident may inadvertently be obscured by a medical examiner who is not familiar with hyperbaric physiology. For this reason, the broad dissemination of information relating to the proper autopsy procedures in such cases is important. It is proposed therefore to develop a recommended system for medical examiners which coordinates

the requisite medical expertise on the handling of diving casualties.

- Medical Criteria Standards: The growth of national diving activities has been accompanied by an increase in diving related medical problems. Medical aspects of diving is a subject area which is not covered well in most medical school instruction since these problems are not seen much, if at all, in the general practice of medicine. Interested physicians can easily acquire the knowledge of the general aspects of diving medicine sufficient to treat common diving complaints or to recognize the need for consultation with an expert specializing in complex diving medical problems. It would be useful to patients and medical practitioners alike if the incidence of more common medical problems of diving were identified and standard guidelines were established for the provision of medical care to divers and for the conduct of medical and paramedical instruction in general diving medicine. The results of this study will be fed into existing physician and Emergency Medical Technician Diving (EMTd) training programs.

An additional area needing investigation involves identifying individual differences with respect to tolerance to increased atmospheric pressures and the effects of such increases on performance and the subsequent refinement of medical examinations.

- Epidemiological Study: This would be a broad study to determine long range health problems associated with diving, factors associated with pressure-related accidents, effectiveness of different decompression sickness treatment regimes, and causes of fatal diving accidents. Such a study not only would aid in improving diver safety and health, but would aid in the acquisition of actuarial data and provide information to assist in the selection of future research areas.
- National Diving Data Center: Establishment and maintenance of National Diving Data Center to collect, analyze, and disseminate data related to decompression, treatment of diving casualties, and diving accidents. This center would include the National Diving Accident Network referred to earlier, now being established by NOAA and the Undersea Medical Society. The Center would fully

utilize existing data and reporting procedures.

- Air/Nitrogen-Oxygen Saturation Diving: Recent investigations have shown that it is possible to use air and nitrogen-oxygen breathing mixtures in situations which heretofore were thought to require more exotic and expensive breathing gases. Extended bottom times can be obtained at depths up to 250 fsw when divers saturate on air or nitrogen-oxygen mixtures at depths from 50-100 fsw. Additional research is needed, however, to develop repetitive dive schedules, decompression procedures, and the procedures for using helium-oxygen as a breathing gas when making excursion dives from a saturation breathing mixture of air or nitrogen-oxygen.
- Helium-Oxygen Diving: Although helium-oxygen breathing mixtures have been in use for many years, the significant increase in diving depths is continuing to require new research. For example, studies are needed to further refine and improve the safety and efficiency of excursion diving from saturation on helium-oxygen breathing mixtures. Specifically information is needed on optimizing compression rates and decompression profiles. In addition, there is a need for improvement of helium-oxygen diving procedures for diving to depths of 150-600 fsw for bottom times of 30-60 minutes.
- Thermal Problems in Diving: Diving in winter, northern latitudes, in deep water, or when using helium, can produce severe thermal problems when the diver is not protected adequately. Chilling, even if not severe enough to threaten life, will produce loss of dexterity and sense of touch in the hands, making it difficult for a diver to do useful work or in some instances to control diving equipment. Shivering causes a lack of coordination and may make it difficult for a diver to hold even a mouthpiece in place. The ability to think clearly and short-term memory also may be affected seriously by cold. A combined approach must be pursued to develop protective garments which will permit divers to work safely and efficiently underwater in all depths and locations. A program of medical investigations and biomedical development in the area of thermal stresses in diving is essential.

Areas requiring study include: establishing thermal tolerance levels; improving methods of monitoring the diver's thermal state; developing improved insulation and self-contained power sources;

developing methods of rewarming; determining thermodynamic and physical properties of diving gases; define the relation between body heat loss and performance; and investigate the role of evaporative heat transfer in hyperbaric gas environments.'

- Microbiology: Microbiological hazards with respect to diving fall into three general categories: the effects of increased atmospheric pressure on the behavior of microorganisms; the possible effects of increased pressure on the human immune response; and infections from pathogenic organisms found in sea water. Research is urgently needed to define the consequences of these variables for diving. Specific areas in which research is needed include: the effects of hyperbaric conditions on the permeability of chemicals in microbial processes, microbial metabolism of organic and inorganic compounds, enzyme activity, and protein synthesis.

Research is also needed related to infectious and immunological procedures in connection with problems stemming from living in close confinement such as in pressure chambers or undersea habitats.

With respect to the third category, there has been recognition of increasing health risks to divers operating in polluted waters. In order to assess the risks involved, as well as the efficacy of decontamination procedures currently employed aboard vessels and offshore platforms, it is necessary to carry out microbiological studies that include both microbial ecology and medical microbiology, so that the incidence, seasonal and spatial distribution, persistence, and pathogenicity of the microorganisms found in polluted estuarine and marine water and sediment can be determined.

- Mechanism of Oxygen Toxicity and its Prevention: Oxygen is an essential element in any breathing mixture used in diving and its exact proportion must be controlled carefully within a relatively narrow range in order to protect the diver against the hazards of either too little or too much oxygen. Since the partial pressure of oxygen is a function of both proportion and absolute pressure (depth), protection against the variations

if oxygen pressure becomes an increasing problem with deeper diving as the percentage of oxygen in the breathing mixture must become smaller and smaller. On the other hand if protection against oxygen toxicity could be developed there are a number of applications for reducing decompression time or for improving the effectiveness of recompression therapy in which the utilization of high pressures of oxygen would have definite advantages. There is a great need, therefore, to conduct investigations into the effects of oxygen under pressure, both in the basic research areas of the biochemical mechanisms of oxygen toxicity and its prevention and in the more applied/developments of testing compounds or diving procedures which enhance diving capabilities while avoiding oxygen toxicity.

- Sudden Loss of Consciousness of Divers: There have been a number of unexplained cases of loss of consciousness of divers during operational diving, some of which have resulted in death. The underlying mechanisms may involve physiological responses to hyperbaric conditions or variables associated with the partial pressures of the gases being breathed. If such deaths are to be prevented in the future, a better understanding of the physiological mechanisms is needed, especially with respect to cerebral function.

- Cardio-Respiratory Effects of Hyperbaric Exposures: The need to breathe compressed gases in diving to compensate for increased hydraulic pressure is the source of problems of decompression sickness and of the requirement for decompression schedules.

The difficulty in ventilating with dense gases and of expanding the lungs against water pressure affects CO_2 removal from the body and through that the body's acid-base balance. All blood circulates through the lungs. Hydraulic pressures in diving force body fluids into the lung cavity where they affect both ventilation and circulation. A knowledge of the dynamic effects and and interactions of these cardio-respiratory responses is probably basic to a complete understanding of almost every biomedical change in diving. Every advance in diving technology, development of new diving gas mixtures, new underwater breathing

...processes, extension of depth capabilities or prolongation of time at present diving depths will require a re-evaluation of how such changes in the conditions or environment of diving will impact on the diver's safety and health. An understanding of these processes might point the way to safe engineering or operational exploitation of new possibilities in diving. An integrated program of investigation into the responses of the cardio-respiratory system to diving conditions is essential to the success of any biomedical research program in diving.

- Formation of Bubbles: Studies are needed of the exact mechanism for formation of bubbles in the divers body and the relationship between general bubble formation and the specific initiation of decompression sickness. The formulation of decompression schedules to avoid decompression sickness is a pragmatic and inexact process just as is the formulation of recompression therapies to best treat the diver injured by decompression sickness or air embolism. Being inexact the procedures are often inefficient or ineffective and fail to protect the health and safety of the divers concerned.

New technologies in bioengineering and computer sciences have provided a beginning insight into the dynamic processes involved in inert gas functions within the body and in the formation and resolution of bubbles in living tissue. Investigations are needed into such factors as the difference between various inert gases, or combinations of them, which might be used in diving breathing mixtures.

Further progress in these investigations is fundamental to our understanding of the scientific basis for human diving. The information generated can be bioengineering data for accurate and efficient computer modeling of decompression procedures and can also lead to improved recompression therapies based upon a fuller understanding of the generation of decompression injury and of the best means to restore normal function after such injury.

- High Pressure Nervous Syndrome: When vertebrates, including man, are exposed to pressures greater than 15 ATA, either in the dry hyperbaric environment of a pressure chamber or by the hydrostatic pressure of actual submersion, signs and symptoms appear which include tremors of the extremities, more severe myoclonic jerking, fatigue, and ultimately convulsions. In association with these characteristics, there are changes in the electrical activity of the brain and, at times, nausea, dizziness, vertigo, and feelings of euphoria.

In humans the above signs and symptoms comprise the High Pressure Nervous Syndrome (HPNS); they are affected by the rate of compression as well as by the hydrostatic pressure attained. At depths greater than 1500 fsw, even with very long compression times signs and symptoms of HPNS remain which may affect the performance, health, and safety of the deep diver.

Once the taxonomy and signs and symptoms of HPNS have been identified, it is of importance to determine the best methods or profiles for compressing divers to great depths. This may involve testing and applying such factors as selection of personnel, compression profile, accommodation and adaptation, adjustment of temperature, and the use of nitrogen or various anesthetics to modify HPNS.

- Dysbaric Osteonecrosis: Dysbaric Osteonecrosis refers to destructive changes in the relative density of the affected bone. These changes are not of infectious origin, and they have been noted in many conditions such as chronic alcoholism, pancreatitis, sickle-cell anemia, in patients using systemic steroids, and in caisson workers and divers.

Despite the steady increase in published information, important facts about the cause, course, and prevalence of osteonecrosis are still unknown.

Differences in compression/decompression exposures, inert gases, types of work, and traditional practices all appear to influence the occurrence of this condition.

The medico-legal aspects of this disease need to be established. Understanding the differences between compressed

air workers and divers, in terms both of anatomical sites and prevalence, may clarify the problem somewhat.

In addition, experimental, clinical, and epidemiological research is needed to enhance our ability to treat and prevent this condition.

- Audio-Vestibular Injuries in Diving: Injury to the inner ear of the diver has serious and often permanent effect on the ability to hear or to maintain normal balance and equilibrium (not to mention the acute but extremely distressing symptoms of nausea, vomiting, and vertigo). These injuries are presumed to be the result of decompression sickness of a special type. The phenomenon is now recognized in association with rapid ascents in very deep diving. Investigations of the genesis of decompression bubbles in the anatomically protected organs of the inner ear, and of the mechanism of injury in such decompression accidents involving the audio-vestibular system may turn out to be extremely fruitful for the understanding of the general mechanisms of inert gas transfer within the body. That understanding may be necessary for the development of successful computer modelling of decompression schedules and of the rate of outgassing of the inert portion of diving breathing mixtures from the body of the diver.
- Medical and Surgical Treatment Under Hyperbaric Pressure: As more and more diving man hours are spent in saturation diving operations, the possibility for serious illness or injury to the diver at work increases. Medical or surgical treatment within the diving chamber under pressure may be unavoidable. Even emergency decompression for transfer to a medical center for necessary treatment may involve more delay than is permissible under some circumstances. In preparing to deal with a hyperbaric medical crisis, the doctor must be aware of the constraints of the chamber and of the lack of medical precedents and guidelines. Are the dosages of common pharmaceutical agents, antibiotics or anesthetics, for example

altered by high-pressure? The reversal of anesthetic effects by high pressure is a well known but poorly understood phenomenon. Thought must be given to diagnostic tests and procedures that will work in the chamber, to the selection of anesthetic approaches and surgical procedures, to the requirement for communication equipment adequate to provide expert consultation to the medical personnel at pressure within the chamber, and to the conduct of nursing and life-supporting procedures while the patient is being decompressed before transfer to medical treatment centers. A compendium of such information and procedures would be invaluable to (1) those who are called upon to render emergency medical or surgical treatment in the chamber and (2) those who have responsibility for the medical care of workers in the diving industry and for the advance preparations necessary to make such emergency procedures successful.

- Delayed Treatment of Decompression Sickness: In instances in which there is a significant delay between the onset of decompression sickness and recompression, standard treatment procedures may not be effective. Such instances can result from operating in a remote location, failure of a recompression chamber to function properly, or transportation difficulties.

Studies are needed to determine the best pre-recompression treatment procedures, i.e., adjunctive drug therapy, administration of oxygen, intravenous fluid therapy, as well as the development of alternative treatment procedures when the standard procedures fail to alleviate symptoms of decompression sickness.

Research is needed, therefore, to establish proper treatment methods (both saturation and non-saturation), the role of adjunctive drug and fluid therapy, establishment of treatment flow diagrams, and related emergency care enroute to the treatment facility.

VII. Priorities

Program priorities will be established so as to achieve a balance between solutions to immediate problems and to those of a long range nature, taking

into account both existing and anticipated government and industry programs. No priorities will be established until comments from all involved government agencies and the private sector are considered.

VIII. Program Management

The Department of Commerce (NOAA) will serve as overall lead agency and will coordinate the implementation of this program. Following the establishment of priorities, based on comments from Federal agencies and the private sector, agency initiatives will be agreed upon and requests for funding or redirection of existing programs will be implemented. Some selected programs may be carried out on a cooperative basis using reimbursable funds where appropriate. Attempts also will be made to conduct cooperative programs on a cost-sharing basis with industry. There will be continual interaction and re-alignment of priorities as needed during the development and implementation of the program.

X. Schedule

January 17	Completion of preliminary draft by lead agencies
January 22	Meeting of other Federal agencies to present and discuss draft
February 5-7	Announcement of the PDP procedures and status at the International Diving Symposium, New Orleans
February 16	Second interagency meeting to discuss and receive comments from other Federal agencies
March 2	Completion of revised draft PDP
March 9	Announcement of plan in the Federal Register
March 12	Draft PDP mailed out to academic and industrial community and to all other interested parties for comment
May 11	Comments received from public sector and discussed during an open symposia in Washington, D.C.
June 29	Completion of final Program Development Plan
July 31	PDP submitted to Department of Commerce

Enclosure #4

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The CHAIRMAN. Thank you, Mr. Wallace. Do Mr. Eberle and Mr. Wilson have anything to add?

Mr. WALLACE. No.

The CHAIRMAN. Mr. Forsythe?

Mr. FORSYTHE. Thank you, Mr. Chairman.

I thank the panel of witnesses. I think you had very helpful testimony. Mr. Lawrence, you know that this committee last week revealed to the Department of the Interior a 5-year leasing schedule that had been completed and called for a maximum of five or six lease sales a year. And while they had denied they had completed the schedule, they released it within 24 hours.

The schedule contained a leasing program after 1981 that was substantially less than the recommended schedule by the Department of Energy, having four sales in 1980, five in 1981, five in 1982, five in 1983, and only six in 1984. We have heard from DOE that seven sales a year, with three in the gulf, is the optimum scheduled. The difference between seven sales a year and DOI's proposal represents a loss of a billion barrels of oil.

Can you comment on this situation, particularly as it relates to the lack of expanded exploration in our frontier areas?

Mr. LAWRENCE. Yes, Congressman Forsythe. We would be very much more comfortable with the Department of Energy's projection on more extensive a basis. I think with the events of the past several months, with the insecurity of oil supply from the Middle East, our domestic energy policy literally cries out for more aggressive development.

I think, also, as far as the gas industry in particular is concerned, the greater focus on the contribution that gas can make to this Nation's total energy needs that came out of the extended debate of the past year of the Natural Gas Policy Act made it increasingly clear that there is indeed a huge natural gas energy potential.

We think there is a very significant potential in the frontier OCS areas, as well as in the remaining unleased areas of the Gulf of Mexico. So what you refer to lies at the very heart of our recommendation that the DOE and not the Department of the Interior should have the authority of prescribing leasing schedules.

Then, in their capacity as manager of public lands, the Department of the Interior could certainly go forward with their implementation procedures, pursuant to the act. But the scheduling of it is an energy issue, not a public lands management issue, in our opinion, and especially so in light of the current situation.

Mr. FORSYTHE. The question as to whether the industry had the capability, both as to capital and as to its rigs, was a factor that was discussed at our hearing last week. DOE said that they had surveyed this and that they were confident that the seven-lease schedule could be met by industry in both of those areas. Would you agree with that assessment of DOE?

Mr. LAWRENCE. I have a great deal of confidence in DOE's realism, rather than optimism, in that regard. I think, as far as capital is concerned, the tremendous bid amounts that have come forward in areas of high-search potential have demonstrated that time and time again.

As far as the availability of rigs is concerned, I think the drilling industry has demonstrated a great flexibility to provide the resources when the occasion requires it. So I would indeed agree with DOE's recommendation that both of those would be available.

Mr. FORSYTHE. It is really free enterprise at work when this is going on.

Mr. LAWRENCE. And it works very flexibly and very effectively; it amazes a lot of people.

Mr. FORSYTHE. Thank you, Mr. Lawrence.

Mr. SAVIT, on onstructure drilling—and you mentioned that if you had the opportunity, you would prefer for us to bring up questions—do you know that DOI has recently published proposed guidelines for onstructure drilling? It is my understanding that the oil geologists are opposed to this practice. Would you mind commenting on the need and the advisability of prelease, onstructure drilling and who would be interested in such authority?

Mr. SAVIT. Well, I think the question of authorizing onstructure drilling hinges very greatly on what one is trying to accomplish from a national standpoint. If the aim is to make sure that whatever oil is produced is produced to generate the maximum revenue to the Government and to maintain the oil industry in a utility-type framework where a reasonable return can be gotten, on the average, then I think that onstructure drilling is an appropriate means of doing it.

On the other hand, if the goal is to find as much oil as possible—find all the oil and gas that is out there, with due deference to Mr. Lawrence—

Mr. FORSYTHE. It is stipulated that when we say oil, we also mean gas.

Mr. LAWRENCE. I would rather we said it. [Laughter.]

Mr. SAVIT. Actually, I think it is natural gas that we are presently looking for on the Atlantic coast, rather than oil, at the moment. But if the intent is to find all the oil and gas out there, what one needs is strikingly different ideas and brave ventures into the unknown.

We have to encourage people who have new ways to interpret geophysical and geological data and go out and find that oil and gas which hitherto would not have been found, and there is a great deal of it. We can even refer to the very excellent paper that Dr. Menard wrote some years ago before he became Director of the USGS, in which he showed, on a statistical basis, that there must be a great deal of oil and gas out in the unexplored, and even in the explored, parts of the United States that exists in a different fashion than people are normally accustomed to seeing.

So what we have to do is to encourage people to go out and take the big risks, to go out and drill in places that no one else knew before and which most people thought were not necessarily good.

The only way to encourage people to take these big risks is to have the promise of very large gain as a result of taking the big risk. The only reason people buy lottery tickets is that they have not really evaluated whether that lottery ticket really is worth what it costs, because it really is not worth its cost, but because the promise of an enormous gain is there. It is only when you promise an enormous gain that you get people to take unreasonable risks.

The only way, historically, that we have ever had of finding deposits of oil and gas in unknown, untested, and untried areas has been to encourage people who have imagination and courage to take these risks and to persist, despite the existence of many, many setbacks.

I have mentioned before to this committee that in the Alberta Basin of Canada, 151 dry holes were drilled before the productive key was found—before somebody's imagination led him to take that 152d stupid chance that brought out the billions of barrels of oil that exist in the Alberta Basin. We have to encourage people on our OCS to take these ridiculous chances and not to play it safe, not to do these very well-organized things that we tend to do by onstructure drilling.

Mr. FORSYTHE. Well, again, onstructure drilling can depress the interest in taking that risk, because it presumably says something.

Mr. SAVIT. That is exactly it; it depresses the interest. It discourages people; it encourages the Government to believe that an area is no longer promising and to take that area out of the lease sale schedule, and so on.

Mr. FORSYTHE. Well, that leads me right into my next question which concerns lease sale 49 in the Baltimore Canyon. Because of mud slides, 44 tracts were removed from that sale at the last minute. All of these tracts appeared to be in the most promising locations. Do you feel that this action had a deflating effect on that sale?

Mr. SAVIT. I am absolutely sure it did, because if you look at some of the new technology that has been applied out there, that is the area, precisely where those mud slides were reported to be, that offers some promise of new ways of finding oil and gas out there. Simply withdrawing those things have discouraged the people from coming in and bidding on the others.

Mr. FORSYTHE. Do we have the technology to safely drill in that situation?

Mr. SAVIT. I think we have the technology to do anything in the OCS that we want to do safely. The only problem is, how much does it cost? If there is a reasonable chance of finding a major deposit out there, we will put the necessary money in and do the safe things that have to be done.

We have operated safely in all kinds of areas of the world under much worse conditions than that particular one, and it is simply an engineering problem that can be solved.

Mr. FORSYTHE. Therefore, you would say that you do not believe there was any valid reason to have removed those tracts on that basis?

Mr. SAVIT. On that basis, I would certainly say not.

Mr. FORSYTHE. Well, that is what we are being told as to why they were removed.

Mr. SAVIT. I would have to say that had I been making the decision, I would certainly have not withdrawn those tracts.

Mr. FORSYTHE. We keep seeing updates by DOI of increased estimates in OCS resources. Do you have any accurate idea at this point of the degree of hydrocarbons on the OCS?

Mr. SAVIT. We do not have an accurate idea. All we have are statistical estimates, and you can change your basis for estimates slightly and come out with a huge change in the final result.

Mr. FORSYTHE. The only way to do anything about that is to expand lease sales and get on with exploration.

Mr. SAVIT. And let people try out their ideas.

Mr. FORSYTHE. Mr. Wallace, you say that this whole situation in terms of regulation, studies, and so forth, in the area of diving safety is pretty much out of hand?

Mr. WALLACE. Yes, sir.

Mr. FORSYTHE. I have 21(e) before me, and I agree with you; it provides for study only by NOAA. You allege that they are, in fact, preparing to go to regulation?

Mr. WALLACE. Yes, sir. There is a letter that is in the enclosures that would point this out.

Mr. FORSYTHE. Mr. Wilson?

Mr. WILSON. They have absolutely committed that what they do, OSHA will pick up and put into their regulatory system. It is not a question of just doing a study. OSHA has already committed that they are going to take those studies and do more regulation on the diving industry, and it is in the exhibits here.

Mr. FORSYTHE. The authority they are going to use is the OCS authority?

Mr. WILSON. I think, sir, that the long-range plan of NOAA goes far beyond this. I think the wet NASA bureaucratic concept here really shows itself, if you read between the lines. If you read this exhibit No. 3 here, you will see that all through here it says that we cannot dive unless NOAA shows us the way or approves of the way that we are going to carry out our operations.

Mr. FORSYTHE. Are you saying that they have no legislative authority to do that today?

Mr. WILSON. Through OSHA, sir, yes.

Mr. FORSYTHE. So far as 95-372 is concerned, as I understand it, the Coast Guard is clearly the lead agency here. As far as NOAA is concerned, the language of the act gives them only study responsibilities.

Mr. WILSON. Yes, sir, but they are saying in their preliminary proposal here—

Mr. FORSYTHE. They are saying it, whether they have authority or not.

Mr. WILSON. They are saying it here, yes, sir.

Mr. FORSYTHE. I have some questions here, Mr. Chairman, from our member, Mr. Treen, who could not be here.

The CHAIRMAN. We will submit those questions to panel, and if the panel would respond in writing on the appropriate questions.

Mr. FORSYTHE. We will submit them to you, and if you will respond to these questions by Mr. Treen, all having to do with the diving problem and the OCS we would appreciate it. No further questions.

The CHAIRMAN. Counsel?

Mr. O'BRIEN. Mr. Lawrence, why do you think we had the relatively bad showing that we did in the last Baltimore Canyon lease sale? They only had 41 million dollars' worth of bids, compared to \$1.1 billion on the one before that.

Mr. LAWRENCE. I guess the recent trend has not looked too good as far as the public announcements are concerned. I would refer back, though, to Mr. Savit's point. We are not looking for that 151st well out there yet, but we are looking for that 10th well.

There has been a significant commercial show in 1 out of 10, which I think the industry has rather historically portrayed as about the odds in rank wildcat areas. But I suspect that Mr. Langston and others directly involved in exploration departments of the bidding companies should shed a little more light on that.

But I would have to feel that some of the recent dry hole results undoubtedly had a dampening effect, plus other drilling alternatives elsewhere, hopefully in the deep areas as a result of the Natural Gas Policy Act, which could be a factor in a better choice of funds.

Mr. O'BRIEN. Last week, the Deputy Assistant Secretary of the Interior indicated that she did not believe that the alternative sliding scale bidding system that was used had an effect or impact at all insofar as decisionmaking went. Do you have any view on that? Do you think that you share that view?

Mr. LAWRENCE. I do not know that I could point to a specific impact that it might have had on that particular lease sale, Mr. O'Brien, but we are very strong proponents of the sliding scale bid, and not just on the royalty bidding concept, but in some sort of a flexible bidding system that would permit funds actually expended to go for putting the pipe and facilities in the ground, rather than just to replenish the treasury.

Mr. O'BRIEN. Recently, the Secretary of the Interior withdrew one-third of the area that was scheduled for lease sale 48 for June; this is off the coast of southern California. This was in order to meet environmental concerns at the State and local levels. Do you have any response to that, or any particular view on that?

Mr. LAWRENCE. Yes, and we have conveyed these impressions to officials at Interior, including the Secretary. We are disturbed by that, because we think there is a very significant gas potential off southern California. And there is no more significant contribution that can be made to environmental enhancement in southern California than additional natural gas supplies because of their unique air quality problem in the Los Angeles basin.

So we think that is very unfortunate and should be reversed. There should be an all-out effort there.

Mr. O'BRIEN. Today's press also carries a report with respect to the *Sohio* decision on a proposed pipeline, I believe, from the west coast to the east coast. How do you think that will affect the Northeastern United States and, in turn, how would that impact OCS development.

Mr. LAWRENCE. I guess I have, historically at least, looked upon that as more of an Alaska crude oil marketing problem than a development problem, Mr. O'Brien. In any event, I think there are others here more competent to address that than I.

I do not think it would have any significant impact on exploration in natural gas-prone areas, which we consider that to be and which we think should move forward.

Mr. O'BRIEN. Thank you. Mr. Wallace, a couple of questions. At page 5 of your statement, you describe some of these NOAA meet-

ings as unilateral, and I wonder if you could provide us a little more by way of general background on the meetings with respect to who attended and whether or not they were noticed in the Federal Register; precisely what those six meetings were about and when they took place.

Mr. WALLACE. I am going to let Mr. Wilson handle it, because he has some papers in front of him. But these were mostly picked up by letters that were sent from agencies that we happened to come across, where we have found that the meetings have been held.

Also, in some of these letters, they have said that there was industry input and we know for a fact that we have never attended a meeting of any type for this group.

Mr. WILSON. May I answer that, sir? On page 6 of our exhibit No. 3, the first two paragraphs—now, this is the NOAA proposed plan—right off the bat, they say:

In addition to Federal agency representation, the industrial and scientific communities have contributed to the development of the plan to insure that the needs of the working diver are met. The process by which the above was achieved was to hold a series of planning meetings involving the lead agency, which were extended early to include the appropriate Federal agencies as cited above. This plan could not be developed properly without the cooperation of, and contribution from, commercial diving.

We have never been contacted, and that is why we are very concerned about this. Here we have an agency that is writing its own ticket, and I think it has to be stopped.

Mr. WALLACE. We are very concerned about it, because when they do say there has been industrial input, we do not know where it came from. Certainly, the Association of Diving Contractors, with the representation they have, would be a main source of input.

Mr. O'BRIEN. Who was the author of this development plan?

Mr. WILSON. There is an agency list, sir, in the back; I think it is our last exhibit. Exhibit No. 4 gives you all the names of the individuals from the various Federal agencies that participated in developing this plan. NOAA is the lead agency; they are chairing it.

Please note that in this list here, there is nobody from the diving community. There are a bunch of doctors, regulators, et cetera; there is no commercial representation here at all.

Mr. O'BRIEN. At page 6 when you refer to NIOSH, you indicate that NIOSH is unilaterally committing funds for diving research without waiting for the NOAA plan to be presented for public comment. Could you provide some specifics on that? If you do not have them now, could you provide them for the record?

Mr. WILSON. There are two contracts; one is a contract to do a study on first aid kits for decompression chambers. Well, this has been done 30 or 40 years ago and has been rehashed by the U.S. Navy probably several dozen times. There is another study to go into respirators for decompression chambers.

I personally sat on the various committees during the OSHA hearings on diving, and we beat this subject to death. It is all known knowledge. What they are doing is expending Government funds for work that has already been done, and it is being joked about right now amongst the people.

Mr. O'BRIEN. How much money is involved?

Mr. WILSON. It is not too much money on these two little plans; I think it is 10,000 apiece. But the epidemiological study that is being done here will probably cost in the neighborhood, I would say, of about \$500,000, and that is also ongoing. NIOSH has already come out and attempted to make the first contacts on this to do the epidemiological study and we have rejected them.

We say, wait a minute. First, we have to show a need for an epidemiological study. You just do not spend money on things because it is fun to do, or give NIOSH something to do.

Mr. O'BRIEN. Thank you. Mr. Savit, at page 5 of your statement, you refer to a conflict here between two of the proposed regulations and you say:

The Secretary gives himself the power to turn over to the States data that he has bought under contractual promise of confidentiality.

Has your organization responded to the proposed regulations?

Mr. SAVIT. One of our component organizations has submitted a statement, pointing out these particular conflicts. I do not have any confidence that those statements will be heeded, since we have had informal conversations with the regulators and they claim that despite the clear intent of Congress, they read some different interpretations of the actual wording, so that they feel that they do have those rights.

Mr. O'BRIEN. Now, you indicate that these data were acquired through contractual promise.

Mr. SAVIT. Some of the data were, yes.

Mr. O'BRIEN. Is there a right under those respective contracts to bring an action if one of the elements of the contract were breached?

Mr. SAVIT. Presumably, there is such a right, and our counsel have generally stated that we would be empowered to bring such an action. However, most of those actions take many years, and generally if we do collect damages, it barely pays the legal fees.

Mr. O'BRIEN. Could you provide those responses for the record?

Mr. SAVIT. Surely.

Mr. O'BRIEN. Thank you very much. Thank you, Mr. Chairman.

The CHAIRMAN. Mr. Hughes?

Mr. HUGHES. Thank you, Mr. Chairman. Mr. Savit, on page 5 of your testimony, you indicate that it would appear that the administration is attempting, by regulation and through other administrative steps, to circumvent the intent of Congress not only with respect to program direction, but with respect to such specifics as the protection of proprietary data and onstructure, prelease drilling.

Are you suggesting there that your concern is over the protection of proprietary data relative to onstructure, prelease drilling, or are you suggesting that there are two different areas that you are concerned about—protection of proprietary data and onstructure, prelease drilling?

Mr. SAVIT. I must apologize for the confusion in the statement; this was rather hurriedly drafted. We are protesting two separate courses of action. The onstructure, prelease drilling has been handled through one set of proposed regulations. The dissemination of

proprietary data to the States has been handled through a different proposed regulation.

Mr. HUGHES. Are you suggesting then that by the administration publishing the proposed rules which would call for permits to be issued to the private sector for onstructure stratigraphic drilling, that they are violating the intent of Congress? Is that what you are saying?

Mr. SAVIT. Yes, I think so.

Mr. HUGHES. Is that what you understand to be the intent of Congress?

Mr. SAVIT. It is my understanding from reading the public record that the question of mandating onstructure drilling was debated rather considerably in the Congress; that the Secretary of the Interior himself asked for the specific authority to do onstructure drilling, and that by rather overwhelming votes, both Houses declined to give the Secretary that permission.

Now the Secretary, I believe, feels that he has that right and has had it all along from the 1953 act.

Mr. HUGHES. If the rest of your criticisms of the Department of the Interior are based on the same understanding of the intent of Congress, then I am afraid you are erroneous in your assumptions, because that was not the intent of the Congress. As a matter of fact, the mandated onstructure drilling provisions were eliminated in conference, only with the understanding that Interior was going to go ahead anyway with the program, and it left the existing law as it was, which permitted onstructure stratigraphic drilling.

There was nothing in the legislative history that indicated that this Congress intended to proscribe the granting of permits to the private sector if they wanted them for onstructure stratigraphic drilling.

Mr. SAVIT. Also, there is an additional point of view that we have; namely, that the encouragement of onstructure stratigraphic drilling would, in fact, strongly inhibit the discovery of new types of oil and gas accumulations.

Mr. HUGHES. Your argument that it would inhibit is a lot different than what Congress concluded. What I am concerned about is your suggestion that Congress intended that the Secretary not have the authority to move ahead with permits for onstructure stratigraphic drilling.

That was not the intent of the Congress; it was just the opposite of that. The reason that the mandate of onstructure stratigraphic drilling was stricken from the bill was because of representations to the conferees that that was not necessary; that the Secretary under existing law had that authority, and indeed he was going to go ahead and exercise that authority.

Mr. SAVIT. Well, then I appear to have been misinformed.

Mr. HUGHES. Thank you, Mr. Savit.

The CHAIRMAN. Thank you. Are there any other questions?

Mr. FORSYTHE. No.

The CHAIRMAN. Mr. Wallace, Phil Oxley, who is the chief geologist for Tenneco, made a comment that probably the area of leasing was too shallow and that the best probability was in about 3,000 feet of water in the Baltimore Canyon area. Does the diving industry have the capability of supporting drilling at 3,000 feet?

Mr. WALLACE. At the present time, Mr. Chairman, I would not say so, not 3,000. But you also have areas such as the Hondo platform of Exxon in California; they set a platform and drilled, I believe, in 850 to 900 feet of water, with no diving requirement other than diving 130 feet, which was all done with air.

So I believe they could drill and produce in 3,000 feet of water because of the past experience.

The CHAIRMAN. Mr. Wilson?

Mr. WILSON. I will add to that. There has been a development in the armored suit. So where the diver may not be able to go, physiologically, because of our limitations on Earth—we may not be able to dive past 1,600 to 1,800 feet; it just may be too difficult. The submarine and articulation—these are other devices that we have to do work with down there.

But I think the diver is an economic tool and he can be engineered around. We are not critical.

The CHAIRMAN. Mr. Lawrence, I guess you can make your plane now.

Thank you very much, gentlemen.

[The following was received for the record:]

TESTIMONY OF GEORGE H. LAWRENCE, PRESIDENT, THE AMERICAN GAS ASSOCIATION,
ON THE NEED FOR OVERSIGHT REGARDING THE OUTER CONTINENTAL SHELF LANDS
ACT AMENDMENTS OF 1978

I am George H. Lawrence, President of the American Gas Association (A.G.A.). On behalf of the A.G.A. and its 300 member companies which provide natural gas distribution and transmission services to 160 million consumers in all 50 states, we submit the following statement regarding the need for continuing oversight regarding the Outer Continental Shelf Lands Act Amendments of 1978 (P.L. 95-372). A.G.A. member companies currently provide almost 85% of the nation's natural gas utility sales.

A.G.A. expresses its appreciation to the Committee for this opportunity to review the ability of new OCS amendments to properly govern the exploration, development, and production of energy resources from the OCS. This also is an opportune time to examine the current status of the regulatory process to implement the OCS amendments, since we last testified before this Committee on December 6, 1978. A.G.A. worked very closely with this Committee and other Committees of the Congress while this legislation was being considered in both the 94th and 95th Congresses to provide insights regarding different issues reviewed during the legislative process. We also wish to commend this Committee in particular for its excellent efforts during consideration of numerous amendments to OCS legislation in both the 94th and 95th Congresses.

We also understand that efforts are underway to potentially fragment OCS oversight over ten Committees of the House, which we firmly believe is unwise in light of the need to effectively develop our nation's OCS energy resources. Effective Congressional oversight necessitates a coordinated approach. Efficient OCS regulatory implementation must also proceed in this fashion. If oversight is fragmented among many Congressional Committees, the ability of the legislative branch to assess Executive branch administration and implementation of the OCS Act is severely diminished. In this regard, we strongly submit that maintenance of the OCS oversight function can best be accomplished by the House through establishment of the House Ad Hoc Committee on the Outer Continental Shelf as a Select Committee for this session of Congress.

As this Committee has specifically recognized in this recent series of hearings, there is a continuing need for oversight of the nine federal department and two agencies involved in the implementation of this complex and comprehensive piece of legislation. Such oversight could facilitate compliance with the stated objectives of the Act while ensuring compliance and cooperation among the Federal agencies and States that have specific roles to perform in OCS development.

Summary of A.G.A. positions and recommendations

A.G.A. would like to express the following particular positions and recommendations for this Committee's consideration:

There is still a continuing conflict between DOE and DOI regarding alternative bidding systems for OCS lands that has not been resolved. It is still unclear which Department will be handling the critical implementation phase of these bidding systems, since coordination of decision-making within the Executive Branch under Section 204 of the Act has not been yet clarified.

Many crucial management decisions regarding OCS development cannot be made until the requirements and constraints of new regulations are known. Critical regulations for the natural gas utility industry which have not yet been released include:

Regulations to implement Section 603 of the Act which encourages expanded participation in OCS development by local natural gas distribution companies. These companies, under Section 603, will find it easier to move the OCS gas they helped develop to their service areas in interstate commerce.

Regulations to implement Section 25 of the Act dealing with development and production plans.

We have also recommended that the DOI leasing plan promote aggressive lease sales during the next five years especially in frontier areas, while encouraging and stimulating prelease sale geological and geophysical exploration activity (non-drilling) by choosing large numbers of tracts for inclusion in future sales. We note that the recently released DOI draft proposed five-year leasing plan provides for an average of five lease sales during the coming years, with substantial slippage in sales from the Georges Banks area. Further, the plan provides for contingency sales in the Gulf of Mexico. This approach does not conform with an optimal program using six sales a year, based on prior A.G.A. discussion of this issue before the Committee on December 6, 1978.

The split in decisionmaking between DOE and DOI must be clarified

A.G.A. has expressed its concern on numerous occasions before this Committee and the Congress regarding the fragmented decision-making on critical energy policy and OCS leasing issues between the Department of Energy and the Department of Interior. This split of authority is counter-productive to expeditious OCS development. A.G.A. has favored leaving jurisdiction over the mechanics of public land management with the Secretary of Interior. However, we have urged that the Secretary of Energy should be the sole decision-maker on OCS leasing schedules and energy policy issues.

Thus, one authority—the Secretary of Energy—could promptly make vital OCS decisions without conflicting sets of responsibility with other Federal departments or agencies. This would also be in consonance with the stated goal of the Department of Energy Organization Act of 1977 to consolidate energy decision-making in one Executive-level department. A.G.A. urges that definitive action be taken between both Departments as expeditiously as possible to remove this uncertainty regarding OCS development that has existed since the passage of the Department of Energy Organization Act.

Critical regulations for the natural gas utility industry have not been issued

The absence of regulations important for the natural gas utility industry is adversely impacting OCS development. Many crucial management decisions regarding OCS development and the investment of substantial capital cannot be made until the requirements and constraints of new regulations are known. Regulations implementing Sections 603 and 25 of the Act will have a substantial bearing upon the extent to which gas pipeline and distribution companies will participate directly in the acquisition and development of OCS leases. Further, delay in issuing these regulations impacts upon the rate at which new gas resources are developed and made available to consumers in these companies' service areas.

FERC has not yet published even the first draft of its policy statement to carry out the purposes of Section 603 of the Act. This policy is crucial to establish the standards under which FERC will consider applications for and issue certificates of public convenience and necessity pursuant to Section 7 of the Natural Gas Act for interstate transportation of OCS natural gas, owned wholly or partly by a local distribution company, from the OCS to the distribution company's service area.

The natural gas utility industry has supported such a "finders-keepers" provision for many years. Although this provision is more complex than comparable provisions in S. 9 and H.R. 1614 considered during the 95th Congress, gas distribution companies that wish to participate individually or as part of a joint venture in development and production of OCS gas must in effect await this FERC statement of policy. In general, state PUC's will not approve expenditures for OCS exploration,

development and production by distribution companies without adequate assurances that such OCS gas will be available in those distribution companies' service areas.

Also, regulations to implement Section 25 of the Act dealing with development and production plans have not been released. Under this provision of the Act, at least once before approving a development and production plan in any OCS area or region, the Secretary must declare such approval to be a major federal action (although the Gulf of Mexico is exempted from this requirement). If the development and production plan contemplates the transportation of such natural gas, the lessee shall also transmit a copy of the plan to FERC at the same time. The Secretary and FERC shall then determine who shall prepare the EIS required by NEPA.

The mandatory EIS required by this section of the Act fosters further delay upon OCS development which is already subject to numerous, unwarranted delays. The additional delay in releasing regulations governing this section of the Act exacerbates the systemic delays fostered by the statutory requirement itself.

The OCS lease sale program must be expedited

A.G.A. has previously submitted that the offshore proportion of U.S. gas resources will increase relative to onshore resources as drilling technology permits deeper waters to be explored and developed. Further, almost 26 percent of our nation's undiscovered natural gas lies in offshore areas under 200 meters of water or less. Almost one-fourth of this potential gas lies off the Atlantic and Pacific coastlines. Thus, the volume of potentially productive deep water sediments there is far greater than in the Gulf of Mexico.

In order to maximize production of offshore gas, the appropriate leasing policy to pursue requires development of the Atlantic and Pacific as frontier areas in proportion to their expected gas reserves, accompanied by continued active lease sales in the Gulf of Mexico. The immediate implementation of this type of leasing policy would result in 30 Tcf more of cumulative gas reserve additions by the year 2000 than a policy that disfavored development of offshore frontiers. Cumulative production under this approach would be 18 Tcf greater through the year 2000 than under a no frontier development policy, directly preventing the need for 3.1 billion barrels of oil imports cumulatively by the year 2000. Thus, the benefits of diversifying U.S. offshore development into our frontier regions are substantial.

Further, A.G.A. has emphasized that the maximum production level falls off as the number of annual sales is reduced. For instance, reduction in the number of lease sales from six per year to three per year would result in a loss of 18 Tcf of cumulative production.

A.G.A. notes that DOI has recently released its draft proposed five year OCS leasing schedule for submission to the governors of affected states for review. The specific program under consideration provides for the offering of an average of five sales a year with a combination of offerings in the Gulf of Mexico and frontier areas. A.G.A. supports this combined approach emphasizing frontier area development accompanied by continued active lease sales in the Gulf of Mexico. We do reiterate our belief that six sales a year would be a more optimal figure for reasons previously discussed, and further we note DOE has recommended that an average of seven lease sales per year be held. Also, we express concern regarding the additional delay in leasing in the Georges Banks area which has great oil and gas potential for the New England region, which is almost four times as dependent on foreign oil as is the rest of the United States.

DOI also indicates that two contingency Gulf of Mexico sales are also included—one in 1981 and the other in 1983. This is a new concept in which subsequent events will determine whether these sales will be held as indicated, deleted, or postponed until a later date.

The issue of contingency sales raises the problem of the cost to industry of frequently changing lease sale schedules. A consistent, long range schedule permits industry to program seismic reviews, drilling activity, funds for lease sales and all of the other long lead time activities. Changes in these long-range plans causes reprogramming of resources with a resulting decrease in the efficiency of industry operations. As the nation seeks to maximize the productivity of the oil and gas exploration and production effort, the government efforts should be directed at allowing the industry to operate at peak efficiency.

On behalf of the American Gas Association and its member companies, I want to thank the the Committee for the opportunity to testify today. We would be pleased to answer any questions you may have.

TESTIMONY OF CARL H. SAVIT, SENIOR VICE PRESIDENT, TECHNOLOGY, WESTERN GEOPHYSICAL CO., HOUSTON, TEX., ON BEHALF OF THE NATIONAL OCEAN INDUSTRIES ASSOCIATION

Mr. Chairman, and ladies and gentlemen of the hearing panel, I am Carl H. Savit, of Western Geophysical Company, Houston, Texas. I appreciate the opportunity to comment on behalf of the National Ocean Industries Association (NOIA) on the continuing oversight hearings of the House Ad Hoc Committee on the Outer Continental Shelf. This important hearing is one continuing step in America's successful offshore development process. It is a step I feel privileged to be taking with you. Privileged because I believe—as NOIA does—that inadequate and misleading information is one of the most insidious enemies of sound public decision-making.

Unless the air is cleared of the myths, ignorance, or misconceptions that often surround offshore energy development, our nation will be severely weakened and NOIA believes this Committee plays an important part in this process. Although Western Geophysical Company is deeply concerned about America's energy future in the eighties and beyond, I join you today, not through my company affiliation, but in my capacity as a member of the Board of Directors of the National Ocean Industries Association.

NOIA is the only national association representing all the various facets engaged in the development and use of ocean resources. NOIA's almost 400 members range in size from small businesses to large multi-national corporations. They are active in a wide variety of operations including: fishing offshore construction, salvage operations, air and marine transportation, oil and gas production and transmission, equipment supply, research, technical and consulting services, catering, deepsea mining, drilling and geophysical contractors, shipyards, financial services, such as banking and insurance companies, diving contractors, and others.

Our association exists with the goal in mind of expanding the vital oceanic frontiers and utilizing this critical natural resource for the benefit of mankind. In the field of onshore, offshore and other marine construction, we represent world leadership, from design to management to construction of drilling, production and other marine platforms and vessels, to construction of piers, loading docks, submarine and land pipelines, and ship repair facilities. And, we are world leaders in diving technology. NOIA member firms are engaged in a wide variety of marine-related engineering and consulting services, industrial production, pollution control, resource recovery, design and engineering of offshore production and support structures, ocean equipment design, and naval architecture. Some of our NOIA members are significantly involved in the commercial fishing industry. Geophysical contractors, manufacturers, drilling contractors, and petroleum exploration and production companies, as well as research and technological development companies and service, support and supply companies are also NOIA members. Shipbuilders and other members of the transportation segment of the marine industries make up another percentage of the NOIA membership. Our annual budget is based on a dues structure that allows a maximum of about 1½ percent dues contribution for any one company.

In enacting Public Law 95-372 last year, the Congress with commendable foresight enunciated 15 findings, most of which are even more valid today than they were when written. The majority of those findings relate to the pressing national need to develop the energy resources of the Outer Continental Shelf. Even those findings that relate to the need to minimize the impact of OCS energy development on the environment, on other resources, and on state and local governments are directed to expediting development by providing avenues for the resolution of conflicts.

There is no room to doubt that the intent of Congress was to provide for the development of the energy resources of the Outer Continental Shelf in a responsible manner. Clearly, Congress did not intend that this Act would be used to impede or delay the critical process of finding new sources of energy and bringing that new-found energy to the shortage-plagued American public.

Despite the clear intent of Congress, attempts are being made to use the Act to halt or to delay indefinitely much of the planned and projected exploration of our frontier areas, lawsuits and administrative objections have been repeatedly raised, almost invariably on procedural grounds. Rarely if ever has a serious substantive objection been put forth.

At this moment plans exist within the Administration that, if implemented, will increase the opportunity for delay in the OCS leasing program. In the Administration's program to establish a Department of Natural Resources, it is presently planned to separate the existing mechanism for administering OCS exploration permits and the subsequent leasing programs from the mainstream of technical and administrative expertise that now exists. In the new Department, these critical

functions would be submerged in a bureau devoted to the management of all marine resources. Within such an arrangement, the interest and motivation to develop energy resources would be subordinated to an interest in preservation of the environment. In view of our national energy crisis, a further tilt toward preservationism and away from energy production could well prove disastrous.

At the regulatory level, the Department of the Interior has published proposed regulations that purportedly are intended to carry out the legislative mandate of the Act. In one part of those proposed regulations, section 252.6 and section 252.7, the Secretary gives himself the power to turn over to the states data that he has bought under contractual promise of confidentiality. He specifically exempts himself from the statutory safeguards of Section 26 of the Act with respect to data relevant to those Federal waters that lie within 3 miles of State waters.

There are adequate provisions in the Act to make available all data that could possibly be needed by State officials to plan joint State-Federal leasing programs. There is no need to take the additional steps of sections 252.6, .7 that could, and probably would, be challenged in the courts as forbidden by the statute and which, in any event, would constitute an unlawful taking of private property without just compensation.

It would appear that the Administration is attempting by regulation and other administrative steps to circumvent the intent of Congress not only with respect to program direction but with respect to such specifics as the protection of proprietary data and on-structure pre-lease drilling.

There is little room to doubt that oversight by this Committee will remain necessary to ensure that the intent of Congress is carried out in the husbanding and development of our Nation's Outer Continental Shelf energy resources.

I also want to make it abundantly clear that NOIA believes we must maintain the momentum of offshore development many concerned citizens have made in conjunction with this Committee. NOIA as an organization, as a group of individual companies, and as many individual people such as myself have been a part of it. Our goal of offshore development with the highest environmental standards remains unchanged.

However, at the same time other considerations of equal weight exist, NOIA urges offshore leasing decisions as well as regulatory actions be considered in the light of the total U.S. energy picture.

Nothing exists in a pure form. All Americans must realize that some energy/environmental tradeoffs are not only desirable, but inevitable and we believe this Committee will realistically face these issues.

It is also vital that this Committee continue in the oversight of ocean development. Other countries are moving ahead in developing offshore oil and, I must add parenthetically, they are doing it with American technology and expertise. Norway is rapidly becoming an oil-exploiting country through the development of offshore oil, and Britain expects to be self-sufficient in oil in the 1980s through the development of North Sea Oil.

Gentlemen, I want to again express my appreciation for this opportunity to meet with you today. We look forward to positive actions on these regulatory matters, and hope that the knowledge you have gained today will give insight to the difficulties involved in maintaining the Congressional intent of the OCS Law.

The CHAIRMAN. Panel No. 2 is Mr. Henry A. Hill, manager of operations, CAGC Marine Region, North American Exploration, Continental Oil Co., and Mr. J. Donald Langston, vice president, Exploration Department, Exxon Co.

Mr. Hill, if you will proceed.

STATEMENT OF A PANEL CONSISTING OF HENRY A. HILL, MANAGER OF OPERATIONS, CAGC MARINE REGION, NORTH AMERICAN EXPLORATIONS, CONTINENTAL OIL CO. AND J. DONALD LANGSTON, VICE PRESIDENT, EXPLORATION DEPARTMENT, EXXON CO., U.S.A.

Mr. HILL. Mr. Chairman, members of the committee, I would like to confine my remarks to that part of the OCS that I know most about, and therefore, my discussion is mainly of the Gulf of Mexico. I would like to discuss the effect of the ever growing list of Federal

regulations on the oil and gas exploration and development activities in the Gulf of Mexico.

Since 1970, the cumulative action of these regulations has caused approximately a 1-year delay in the preparation for the sale and an additional 1-year delay in exploration and development activity following the sale. The effect of the amendments to the Outer Continental Shelf Lands Act will be to add additional delay to what is already a deteriorating situation.

I will use the December 1970 Louisiana lease sale as a reference sale in this discussion. I have shown that in exhibit 1. This is appropriate because it occurred 1 year after the passage of the National Environmental Policy Act of 1969 and at a time when the OCS permitting and proration activities were administered with the assistance of the oil and gas regulatory agencies of the States of Louisiana and Texas. This sale also occurred just prior to the passage of the Coastal Zone Management Act of 1972.

The tracts offered in the sale were nominated 13 months prior to the sale, and the sale was conducted on December 15, 1970. At that time, it was possible to drill within a month after the lease sale. The leases were awarded within 3 or 4 days after the sale, and wells were drilled immediately following the 20-day advertising period required for issuance of the Corps of Engineers blanket operations permit. Under these conditions, the industry drilled 404 exploratory wells and 807 development wells on the 119 tracts leased out of the 127 offered. When we consider the mean point of the exploration cycle for this lease sale, the date from nomination to peak of exploration drilling was one of the more time-efficient—this was one of the more time-efficient sales conducted in the last 10 years. Actually, that time was 31 months, from the time of nomination until we reached our peak of our exploratory activity on this lease sale.

The time from sale date to mean point of the first 3 years of the exploration drilling is a measure of the efficiency of the Department of the Interior and the industry to find oil and gas. When the time of the mean point is calculated for the 1970 to 1975 sales, as I have done on exhibit 2, there is evidence of ever-increasing time losses caused chiefly by changes in the permitting procedures. In 1971, the Supreme Court issued the first in a series of decrees awarding the disputed zone to the United States. At this time, the Federal agencies began to assume the exclusive administrative control over the OCS regulatory procedures. Exhibit No. 2 does not include the regulations requiring exploration and development plans and state information procedures instituted in 1977 and 1978 which have caused further deteriorations of this index of sale efficiency.

I might say here that the reason we have difficulty working those into exhibit 2 is there is insufficient drilling to make a calculation of the peak of exploration activity in those 1976 through 1978 sales.

In exhibit No. 3, I have presented the Texas sale of June, 1973 in the same manner as the December 1970 sale. This is the first sale off Texas since the disastrous, almost nonproductive, sale of May 1968. The mean point of exploration for this sale is 1.5 years. This is the last sale in which sufficient drilling data is available to

define the mean point. In addition, it was, for all practical purposes, a frontier sale for offshore Texas and could be a standard used to judge successful sales in other frontier areas. Nominations were requested 18 months prior to the sale, the leases were granted 7 days after the sale, and 244 exploratory and 266 development wells were drilled. At contrast is sale 51 which we just held in December of last year, where it took 38 days after the sale to award the leases. Natural gas production began in 1978 and oil is being barged from scattered platforms until an oil pipeline can be constructed sometime in 1979. The 5-year gas and 6-year oil production target achieved in this sale is an ambitious standard by which future frontier sales should be compared.

The efficiency achieved in the December 1970 and June 1973 sales will be difficult, if not impossible, to achieve when the regulations required as a result of the amendments to the Outer Continental Shelf Lands Act and the Coastal Zone Management Act become final. A month delay for one set of regulations, 90 days for another, may seem like smalltime delays, but when we multiply these by an average of 500 wells in a successful lease sale, it is obvious that the Outer Continental Shelf Lands Act amendments will not expedite the exploration and development of the Outer Continental Shelf. Sales conducted since 1975 are the first ones to feel the effect of the debate on the Outer Continental Shelf Lands Act amendments and it will take a year or more to document the slippage that has taken place. Of course, the standards achieved in the Gulf of Mexico could never have been accomplished if onstructure drilling was required to define the resource potential before the lease sale.

Now, I would like to make a few comments about further leasing in the Gulf of Mexico. The Gulf of Mexico is classified as an established area, having produced oil and gas for over 40 years. The oil production peaked at 391 million barrels per year in 1972, and the gas production has remained relatively constant at slightly less than 4 trillion cubic feet per year for the past few years. There is no doubt that the gulf will continue to be lower risk when compared to untested frontier areas, but is misleading to count on two or three productive sales per year for the next 5 to 7 years.

We are already seeing evidence of deterioration of the quality of the sale offering. In 1970, almost all the tracts offered were being bid on the first time. In 1979, sales 58 and 58A, two proposed sales for 1979, will be made up of approximately 70 percent used, offered but unbid, rejected, or other than virgin tracts. Thus, although the number of sales, number of tracts, and the number of acres offered in the gulf may appear to remain constant over the next few years, the quality of the offering will most certainly decline.

To further amplify that, in sale 47, which took place in 1977, 66 percent of the tracts had been seen before; in sale 45, which is a 1978 sale, 83 percent of the tracts had been seen before; in sale 51, a 1978 sale, 70 percent of the tracts had been seen before.

With this in mind, it is advisable for the Secretary of the Interior to conduct four to six sales per year in the frontier areas. There is at least a 7-year wait from successful sale to production in frontier areas, and therefore it is important that exploration of these areas be moved forward as rapidly as possible.

It is my opinion that it is unreasonable to expect the amendments to the Outer Continental Shelf Lands Act to expedite the exploration and development of the Outer Continental Shelf. It is also a mistake to concentrate 30 to 50 percent of all future lease sales in the Gulf of Mexico.

This concludes my written statement. I will be pleased to answer any questions.

[The following information was attached to Mr. Hill's statement:]

Exhibit I

DECEMBER 1970 SALE

1211 Wells Drilled

127 Tracts Offered

127 Bld On

119 Leased

111 Drilled

59 Producing

53% Success Ratio on Tracts

NUMBER OF WELLS DRILLED PER QUARTER

Exploration Wells

Development Wells

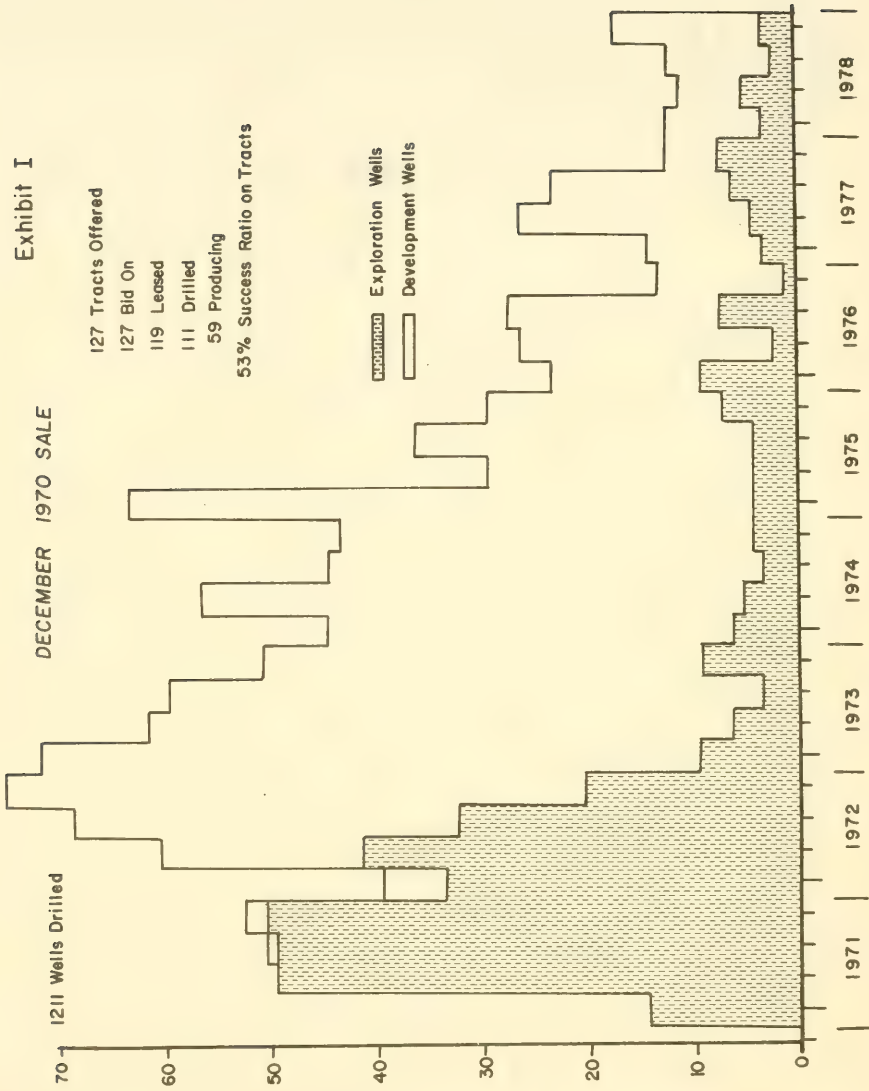


Exhibit II

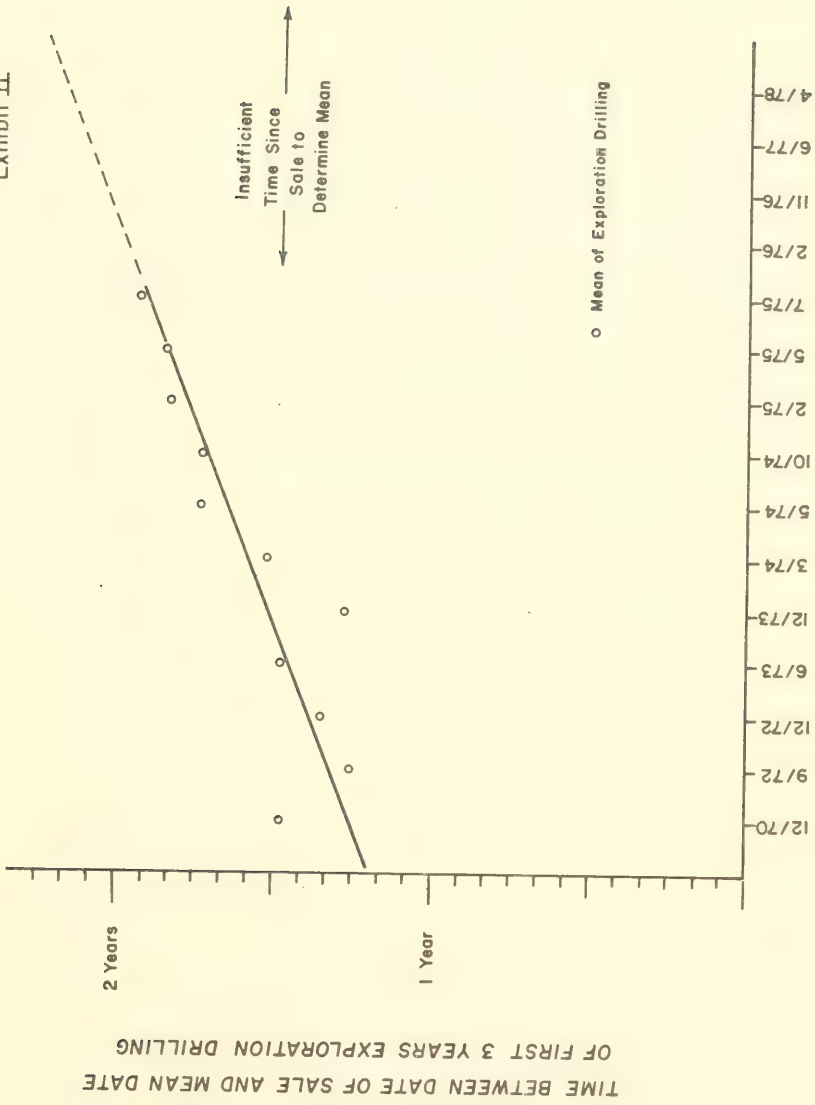
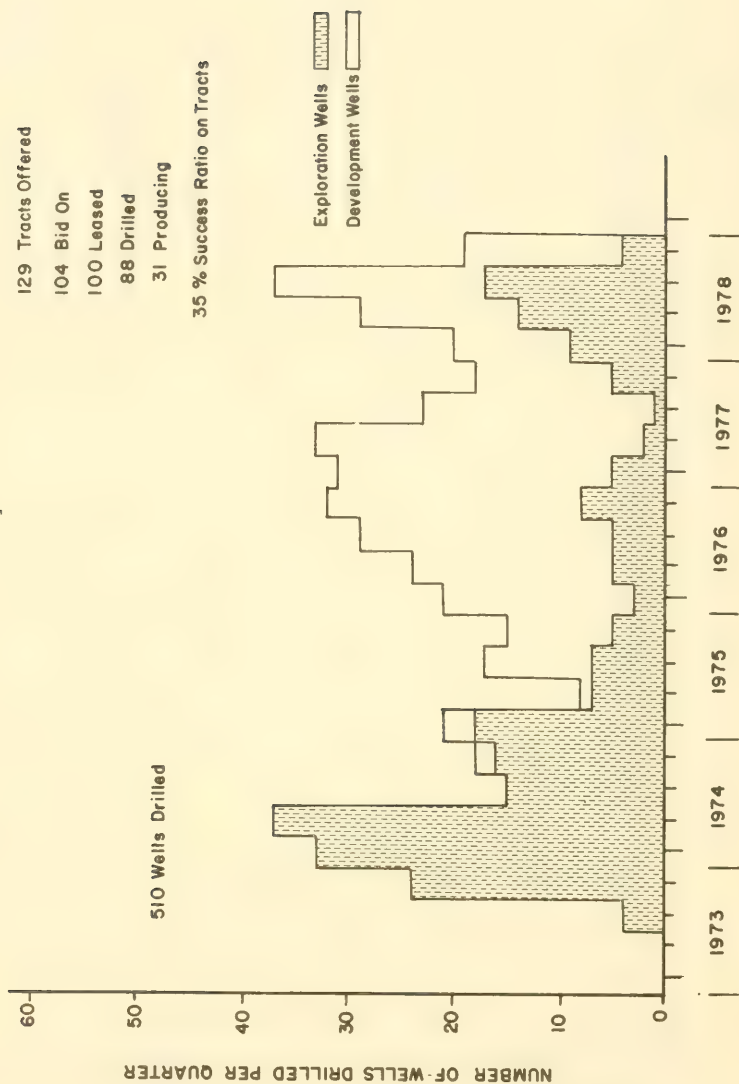


Exhibit III

JUNE 1973 SALE



[From the Oil and Gas Journal, Mar. 5, 1979]

WHY U.S. INDEPENDENTS AREN'T RUSHING OFFSHORE

(By Randy Sumpter, Gulf Coast News Editor)

U.S. independents say the Government has provided more roadblocks than incentives in its efforts to involve small operators in Outer Continental Shelf exploration.

Those hurdles range from a \$35-million oil-spill-liability provision in the OCS Lands Act Amendments of 1978 to an aggravating Department of Interior habit of rejecting high bids.

Some independents find those disincentives coupled with the traditional high costs of offshore operations bar them from the OCS—particularly frontier areas.

Under the circumstances, "there just aren't any bargains left on the federal offshore," one independent claims.

Instead of plunging big on OCS tracts, most independents are making prudent part-interest investments in federal leases in the mature Gulf of Mexico areas or sticking to state tracts off Texas and Louisiana. Bidding and leasing terms are more hospitable and the drilling environment less demanding on the state blocks, independents say.

They add they're skirting high capital costs in those regions through farm-ins or by purchasing joint-venture interests. Few are seeking the role of operator. Most still are in the red or only now nearing the break-even point for their offshore investments.

The independents' view

Independents probably are responsible for about 10 percent of industry's total investment offshore, one operator estimates.

Industry has paid total bonuses, royalties, and rents of \$25.4 billion as of Jan. 1 for OCS acreage alone, according to the U.S. Geological Survey. USGS says total value of OCS production reached \$33.3 billion on the same date.

About 76 percent of the revenue went to the Government and 24 percent to the operators, USGS says.

Less than 1 percent of roughly 10,000 independent operators have the economic resources to go offshore, estimates Lloyd Unsell, executive vice-president of the Independent Petroleum Association of America.

He says IPAA isn't pushing any program with Congress to ease conditions for independents on the OCS. In fact, IPAA's offshore-leasing committee issued its last report in May 1971.

"None of the average independents I know expects to or wants to compete out there (OCS)," Unsell says.

Government efforts

Government has made attempts to equalize the bidding contest between independents and majors for OCS tracts.

The Department of Interior banned joint OCS bidding by major companies producing more than 1.6 million b/d of crude, natural gas, and LP-gas on Oct. 1, 1975 (OGJ, Oct. 6, 1975, p. 54).

One of the OCS amendments provides an exemption to this ban. It allows joint bidding where high costs might prevent exploration and development. Chevron U.S.A. Inc. recently asked Interior for such an exemption for the joint federal-state sale in the Beaufort Sea in December, but the company's request was denied.

Other efforts to attract independents offshore have included experiments with royalty and sliding-scale royalty bidding (OGJ, May 13, 1974, p. 32; and OGJ, Mar. 13, 1978 p. 34). Sequential and oral-auction bidding methods, permitted under broad language in the OCS amendments, also are being considered to stimulate participation by independents.

Both methods are designed to cut the amount of money independents normally leave on the table during conventional (simultaneous) bonus bidding, according to Jeffrey Dorman, an attorney with the Justice Department's energy section.

"There is some reason to suspect under current bidding systems that smaller companies face various capital constraints," Dorman says. They're having to scrape up large amounts of money for bidding and find much of it was for bids which didn't win leases.

"I don't think there is any answer to getting the independent offshore. The only ones who get excited about the prospects are liberal politicians who want the independents to go out and compete with Exxon for elephants.

"That's largely a pipe dream. It's like asking a hummingbird to go out in the gulf and scoop up a 3-lb fish just like a pelican would."

OCS hurdles

The biggest hurdle for independents to overcome in the future?

Unsell says it's "the \$35-million liability for oil spills. With that kind of liability, insurance costs are unbelievable."

Independents have a long list of additional Government-related disincentives and other restraints to their competing on the OCS. They include:

A need for higher and quicker returns on investment than majors.

High front-end costs, starting with lease acquisition.

A sporadic federal leasing schedule.

Interior's practice of "bumping" (rejecting) many high bids.

Additional staff requirements to meet Government regulations.

"It has been suggested that a sequential bidding system might solve the problem. Under that arrangement, only a third or fourth of the bids would be opened the first day of a sale, allowing the companies to determine if they'd won or lost."

The same principle would apply for an oral auction.

"An auction system would let a company know instantaneously whether it had won or not," Dorman says. "But, an auction also might lower the bids on every tract."

"The companies would only have an incentive to out-bid the highest bidder."

The attorney general and Interior secretary are required by the OCS Act amendments to prepare an annual report evaluating new bidding methods, the bidding ban, and other measures and proposals to encourage competition. The first report is due Sept. 30.

The results

For the most part, independents active offshore say they haven't been enticed by the "incentives" supplied by the Government.

And the small operator has found state tracts off Texas and Louisiana far more attractive than the OCS.

"It's easier to work state lands because they're closer in, easier and cheaper to drill, and you're dealing at arm's length with people in Austin and Baton Rouge," IPAA's Unsell says. "The Federal Government just seems to make it more difficult than the states."

Most of the independents which are moving into federal waters are doing so through farm-ins and joint-interest arrangements. Some established firms concede they were fortunate to have gone offshore earlier when conditions were more favorable and before operating costs skyrocketed.

Among those are Mesa Petroleum Co., Amarillo; Louisiana Land & Exploration Co., New Orleans; and Forest Oil Corp., Denver.

They credit much of their OCS success to an early start, and in some cases, to quick production from their first leases and to advance interest-free payments from gas-transmission companies (which no longer are permitted by the Federal Energy Regulatory Commission).

Mesa investments

Mesa held a 5 percent interest each in Eugene Island Block 330 and East Cameron Block 270 when they were leased in 1970. Commercial discoveries followed within 4 months, and the fields were on stream 3 years later.

"It was very important that we didn't have a long lag time for a return on our investment," J. K. Larsen, Mesa group vice-president, says. "Right now, if you bought a lease and discovered production, you'd be fortunate to get it on stream within 5 years."

"A more likely time frame would be 7-8 years."

Larsen blames new Bureau of Land Management and USGS regulations for the longer production lead times.

He says Mesa was able to parlay advance payments from transmission companies and its early successes into "a far greater investment than a company our size could have managed otherwise."

Larsen says Mesa has invested \$254 million in lease bonuses alone since 1970. That's bought the company an average 26 percent interest in 85 offshore tracts, all in the gulf and most on OCS acreage.

Mesa holds an interest in 12 production platforms already on stream and 12 more which should be installed this year.

The company's total U.S. offshore investment is about \$555 million, Larsen estimates. Mesa will realize only a \$98-million gross return during 1979 on that total.

"We've been offshore for 9 years," Larsen points out, "and our investment only now is starting to come back in meaningful numbers."

LL&E, Forest

Forest has been active offshore since 1952, when it joined with several gas-transmission companies in its first bidding venture.

"We got down there early with the backing of gas companies which didn't have the expertise," says Carl D. Hanson, Forest vice-president.

He says the company holds a working interest or royalty override in about 137,000 gross OCS acres. Most of the acreage is off Louisiana. Forest plans to drill 8-10 development wells on the tracts this year.

It operates 26 production platforms in the gulf and plans to put two more on stream during 1979. Forest has a 25 percent share in about 500 MMcf/d of gas production from the platforms.

"We've had a couple of commercial properties in the gulf which have paid for our other ventures," Hanson says. "But it has paid its way, not made a lot of money. I can't see where the Government has helped us much."

Among the most consistent independents bidding in OCS lease sales is LL&E. The company acquired its first offshore lease in 1962 and has bid in every Gulf of Mexico sale since.

It holds 425,000 gross acres on the OCS, including tracts in Lower Cook Inlet and interests in three Baltimore Canyon blocks.

LL&E Pres. E. L. Williamson says the company plans to spend one-third of its 1979 exploration and production budget offshore. That could run \$180-\$190 million, depending upon how many OCS sales are held.

The spending will buy LL&E interests in 80 exploration and development wells—all but two in the gulf—and in eight production platforms scheduled for installation this year.

"Government hasn't provided us with many incentives," Williamson says. "Sliding-scale royalty and joint-bidding bans have done little for LL&E."

HO&M efforts

Government incentives haven't had an impact on Houston Oil & Minerals Corp's offshore ventures, either, says Jim Floyd, general manager of the company's offshore division.

"The Government probably has provided more disincentives," Floyd says. He cites additional staff requirements to meet federal regulations as particularly worrisome.

HO&M got into the offshore business during the mid-1970's and bankrolled 100 percent of its first ventures. About one third of the company's production now comes from OCS and state tracts. HO&M holds a 100-percent interest in two production platforms and 60 percent in a third.

It plans capital spending in excess of \$50 million for gulf projects during 1979. That will include HO&M's interest in 15-20 wells on 160,000 undeveloped acres. The company also holds an interest with Phillips Petroleum Co. in four Baltimore Canyon tracts.

"HO&M plans to expand its offshore activity, primarily in the gulf," Floyd says. "We believe we can make money out there, that's why we're willing to spend some."

He typifies HO&M's offshore operations as "better than break even" and claims the company's exploration and production staff is due most of the credit.

"The only way we can be competitive offshore with the majors is to have an evaluation process closer to what's in the ground," he says. "We don't cover as many prospects as the majors, but concentrate on only a few blocks."

"On them, we give it our best."

Farm-ins, state lands

McMora Offshore Exploration Co. (Moxy), Metairie, La., is employing farm-ins to win a foothold in the gulf.

Moxy announced a 3-year, \$60-million joint venture Oct. 1, 1977 (OGJ, Nov. 21, p. 74). It will serve as operator for three partners, pay 20 percent of drilling costs, and earn 30 percent interest.

"In our opinion, this is the logical way for independents to get offshore," Andre V. Wogan, Moxy executive vice-president, says. "The front-end investment in bonuses has made it difficult for the companies involved to justify more 100 percent expenditures on farm-out tracts."

"It takes a lot more capital to operate offshore—the traditional province of the majors. They've got the money, particularly when it comes to bidding in tracts at large sums."

"That makes many prospects a break-even situation for independents."

On a discounted cash-flow basis, a 12-15 percent rate of return on offshore investments probably would satisfy most majors, adds Dick Volk, president of Energy Reserves Group Inc., Wichita, Kan.

Independents need more—between 15-18 percent, depending on the type of prospect and location.

"I don't see any real incentives or disincentives from Government," he points out. "It's very competitive out on the OCS and it takes front-end money to stay in the game.

"It hurts a small company to put up that much cash for front-end costs."

In the past 5 years, ERG has put about \$24 million of a \$150 million capital budget into offshore operations. Volk says the results haven't been "too lucrative, but we're developing the acreage we hold now."

ERG holds interests in 35,351 gross OCS acres and 21,996 gross state acres, most in the gulf.

State waters

Volk prefers operations on state acreage.

"In state waters, we can do well," he says. "It's not as competitive, and the states don't give you a hassle. They don't try to second guess you and reject bids like Interior.

"If you paid the minimum, the U.S. Government doesn't think you've paid enough and rejects the bid."

"Bid bumping" by Interior helped convince Mitchell Energy & Development Corp., Houston, to abandon the OCS.

"This past year, we bid on an OCS tract off Texas that was both a bonus and escalating royalty offering," says Charlie Eldridge, Mitchell Energy's exploration manager. "Our bid was rejected.

"We bid on the same tract once before. In both cases, we were the only bidder."

Mitchell holds no OCS acreage now, Eldridge says, but is active in state waters, particularly off Texas. Sales are more frequent in Texas state waters, and there are fewer restrictions on drilling and qualifying for bidding, Eldridge says.

Mitchell has an interest in 96,000 acres off Texas and in state bays and inlets. It holds an average 50 percent interest in five fields in Texas waters, all of which it operates. Three have platforms; two are close enough to the coast to be produced through wellhead-to-shore pipelines.

What's needed

Most independents aren't certain the Government's future experiments with bidding will have any impact on them. They do have specific suggestions for improving competition on the OCS.

ERG's Volk says higher prices for oil and gas are needed to make profitable the development of smaller reservoirs on the OCS.

"You need prices ranging from \$2.75 to \$3/Mcf for new gas," he says.

Forest Oil's Hanson agrees.

"There's many things the Government could do to improve the situation," he says. "The biggest would be better gas prices."

Others say more sales are needed.

"The Government needs to hold more sales," says Mesa's Larsen. "That would cut some of the competitive bidding for tracts. There are so few plums that some companies get carried away on front-end bonuses for those that are offered."

The CHAIRMAN. Thank you, Mr. Hill. Mr. Langston?

Mr. LANGSTON. I would like to point out to the committee that although we are sitting as a panel, we do represent two different companies and we might have different answers on the same subject.

I am Don Langston, vice president of exploration for the Exxon Co., U.S.A., and we very much appreciate having the opportunity to present our views concerning the regulations currently being promulgated to implement the OCS Lands Act Amendments of 1978.

It is certainly in the public interest for governmental agencies to solicit industry's opinions and advice concerning proposed regulations on such complex issues. It is also in the national interest for congressional oversight groups, such as yours, to make sure the law and its intent are preserved in the final enabling regulations, orders, and permits.

My company has been involved in offshore oil and gas operations for over 30 years. We have worked in every OCS area that has been opened up for exploration in the United States and, I might add, many others around the world. I hope you will keep this experience in mind and try to understand our concern over the serious problems that inappropriate regulations will cause our industry, the Federal Government, and ultimately, the American public.

We have two major concerns: The proposed regulations tend to defeat the primary purpose of the amendments, and the proposed regulations frequently go beyond the scope and intent of the law and, occasionally, are in direct conflict with it.

Many of the regulations being proposed ignore a stated primary purpose of the amendments, which is to, "Establish policies and procedures * * * which are intended to result in expedited exploration and development of the Outer Continental Shelf." Some of the regulations we are currently reviewing establish complicated, unnecessarily detailed procedures for leasing, exploring, and developing the Nation's offshore resources that can only lead to substantial delay and inefficiency.

On March 5, 1979, Crandall Jones, who is manager of our Alaska/Pacific division, testified before a DOI hearing on proposed revisions to 30 CFR 250.34 and 252. I have attached a copy of his testimony to the text of my comments and request that they be included in the record.

The CHAIRMAN. It will be included in the record directly after your testimony.

Mr. LANGSTON. Let me briefly summarize the points Mr. Jones brought out concerning these proposed regulations.

Section 250.34, dealing with exploration plans and development and production plans, goes well beyond the scope and intent of the amendments. It contains requirements that cannot be found in the OCS Lands Act amendments. For instance: It imposes deadlines for submitting exploration plans; it requires exploration plan detail far beyond what is reasonable, necessary, or useful; it requires development and production plans in all areas of the OCS, while the amendments specifically exclude the Gulf of Mexico; it calls for environmental reports to accompany exploration or development and production plans, a duplication of effort coming in the wake of prelease and predevelopment environmental impact statements.

The proposed revisions to section 252 of the regulations ignore section 26 of the amendments, which provides that confidential information may not be transmitted to affected States without the lessee's permission. Additionally, the revisions clearly conflict with this section of the amendments which specifically forbids sending confidential data to the States prior to a lease sale.

Now, I would like to discuss the proposed revisions to 30 CFR Part 251 which bear on geological and geophysical exploration in the OCS. The change proposed for paragraph 251.3(1), which would permit prelease, onstructure drilling, has created the greatest potential threat we have seen so far to the amendments' original intent and purpose.

You will recall that early versions of H.R. 1614 and S. 9 permitted the Secretary of Interior to authorize geological and geophysi-

cal explorations, including core and test drilling. However, the phrase about core and test drilling was dropped from the Senate version by unanimous consent and from the House bill by a vote of 328 to 77. Elsewhere in section 11(g) of H.R. 1614, the Secretary was specifically authorized to allow onstructure drilling; however, this provision was deleted from the conference report that was subsequently ratified by both Houses. Surely it must be apparent with this brief history that Congress did not intend to give the Secretary authority to conduct onstructure drilling.

Prelease, onstructure drilling will create a two step process. First, there will be a period of exploratory drilling prior to the lease sale, followed by another period of normal exploration and development. This process bears a striking resemblance to dual leasing, a proposal that was considered and subsequently rejected by Congress. Furthermore, permitting oil and gas exploration drilling on Federal lands that are not under lease is tantamount to authorizing Federal exploration, another concept which was considered and eliminated from the OCS Lands Act amendments.

The Department of the Interior has indicated that prelease, onstructure drilling will improve efforts to locate untapped petroleum resources, improve its ability to estimate the undiscovered hydrocarbon potential of the OCS, and provide a basis for planning to meet future energy needs. Exxon does not agree with these conclusions. Prelease, onstructure drilling will not greatly improve the DOI's ability to meet its objectives of providing timely and orderly resource development, protecting the environment, and receiving fair market value for leased resources because, one, one well cannot evaluate most structures and will result in inaccurate estimates of potential; drilling one structure in a basin is a partial evaluation and can be very misleading when applied to other structures in the basin; a dry hole could result in delay of leasing and therefore exploration of an entire area; it does not take advantage of the varying geologic hypotheses that are developed by different companies and the attendant broader exploration evaluation of an area.

Therefore, we strongly believe that the proposed regulations for part 251 should omit the language permitting the Secretary to authorize prelease, onstructure drilling. The legislative history of the amendments clearly show that onstructure drilling was not Congress intent. In addition, the delays caused by onstructure drilling will defeat the primary purpose of the amendments.

Many of the proposed regulations we have reviewed thus far have departed substantially from the intent and purpose of the amendments. Therefore, we become increasingly concerned about what may be in store for industry from regulations still in the drafting stage, especially the regulations which will administer the new leasing systems. Representatives from Exxon and other companies, both large and small, have testified numerous times that the traditional cash bonus system will permit development of the greatest amount of reserves in the most rapid and efficient manner. We strongly urge that the alternate systems be employed cautiously and at a relatively low level. A reasonable and simple approach must be taken toward administration of these systems; otherwise, resource development will suffer.

We see an increasing number of problems arising between industry and Government agencies. Securing permits becomes a more lengthy process, while the number of reports and the amount of detail required constantly increase. Industry's recommendations are frequently met with suspicion; we are criticized for lack of diligence. An adversary relationship seems to have developed between various Government agencies and the oil industry.

This is caused, in part, by the flood of detailed, complicated, time-consuming regulations, whose purpose seems more to confuse than regulate. We urgently need simple regulations that are understandable and easy to follow and administer. The regulations should not be so detailed that they omit any latitude for judgment. An efficient exploration program must have flexibility, but the current trend in regulations is eliminating this flexibility.

Some of the proposed regulations unquestionably impose major, new recordkeeping or reporting requirements on business and will have a substantial economic effect on an individual industry. Therefore, they satisfy two criteria for defining a significant regulation in 43 CFR part 14, authorized under Executive Order 12044. A regulatory analysis should be prepared for such significant regulations, as mandated in the Department of the Interior's own regulations.

We continue to hope that ours and industry's views on OCS exploration will be considered. Yet, the 5-year lease sale schedule released last Friday appears to ignore industry input. We speak of our concern about delay. Yet, the new schedule delays each of the 10 sales that were common to the previous schedule by an average of 6 months. Industry was asked to rank the OCS basins by potential, presumably so that the high potential areas may be evaluated sooner rather than later. Judging from Exxon's basin ranking, from comments Bob Nanz with Shell made before this committee in December, and what has been published of industry's basin rankings in the past, this new sale schedule was formulated with little concern for basin potential or for industry's recommendations.

The U.S. oil industry has the technology and resources to explore the Nation's offshore areas in an environmentally sound and expeditious manner, and remains the best exploration tool the Federal Government has for evaluating and developing our Outer Continental Shelf. The need was never greater, yet the efficiency of the industry is being seriously eroded by the emerging regulatory system. The spirit of cooperation between industry and Government must be restored.

We thank you for this opportunity to present our company's views and stand ready for questions.

[The following material was supplied for inclusion in the record:]

TESTIMONY BY CRANDALL D. JONES, MANAGER, ALASKA/PACIFIC DIVISION, EXXON Co., U.S.A.

TESTIMONY ON PROPOSED REVISION OF 30 CFR PARTS 250 AND 252

Good morning. My name is Crandall Jones. I am manager of the Alaska/Pacific Division of Exxon Company, U.S.A. (a division of Exxon Corp.). I appreciate this opportunity to discuss these proposed regulations in a public hearing such as this. We hope you will have hearings on future regulations such as 30 CFR 251, but also ask that you please provide more response time than was allowed for these present

hearings. Today I will speak to several very important points we would like to make. We will submit detailed comments by March 16.

We have two great concerns about these proposed regulations. First, and foremost, they clearly conflict with, or go well beyond the scope and intent of the OCS Lands Act Amendments of 1978. Our second concern is that the proposed regulations are inconsistent with the primary stated purpose of the OCS Lands Act Amendments which is to expedite and facilitate the development of our OCS resources while at the same time safeguarding the environment to the maximum extent possible. We strongly feel that this primary purpose will not be fulfilled if these regulations are promulgated in their present form. There is no way that a reasonable person acquainted with OCS operations can conclude that expedited exploration and development will result from these complicated procedures. In actual fact these proposed regulations will impede industry activity in the OCS. During my testimony, I will highlight several revisions or modifications to the proposed regulations which must be made.

First, let me say that we believe the proposed regulations are Significant Regulations under the criteria set forth under Executive Order 12044 and 43 CFR Part 14. One of these criteria (Part 14.3) is that a Significant Regulation "imposes major new record keeping or reporting requirements on businesses." A Significant Regulation is also one which would "have a substantial economic impact on the entire economy or on an individual industry." Both criteria are clearly applicable here.

Now I would like to highlight several specific sections of the proposed regulations which are the primary bases for our two major concerns.

Parts (i) and (ii) of Section 250.34-1(a)(4) impose deadlines for submitting Exploration Plans on both new and existing leases. These regulations would violate the rights granted to lessees under leases previously issued. Also imposition of such deadlines by regulation or lease stipulation would go beyond the terms and intent of the law. Section 11(c) of the Act forbids a lessee from commencing exploration until a plan is submitted and approved; it does not say a lessee must submit a plan by a certain time.

It is our view that the Exploration Plan called for in the Amendments should be a short, simple description of an operator's planned activity on a group of leases in a given OCS area over a given period of time.

Amendments to the Act specifically require that the Exploration Plan include, among other things, "the general location of each well" [Sec. 11(c)(3)(C)] proposed in the plan. However the proposed regulations [250.34-1(a)(1)(iv)] call for the "approximate location * * * including surface and projected bottom hole locations of each directionally drilled well." This clearly goes beyond the requirements of the Amendments and beyond any reasonable requirement for an Exploration Plan. As we explore a prospect, information gained from each new well changes our geologic interpretation of the area. Locations for subsequent exploratory wells must be made based on a current rather than an initial interpretation. Therefore, it is essential that the Exploration Plan allow as much flexibility as possible in describing the location of exploratory wells. We also strongly urge language be added to the regulations providing that a plan require modification and resubmittal only when significant changes occur. Without proper flexibility, we envision great delays caused by frequent Exploration Plan modifications and ensuing repetition of the Federal Consistency Certification procedure.

In order to be most helpful to the Coastal States and communities, an Exploration Plan should discuss the amount and type of equipment and manpower to be used and the location and nature of land support facilities. Such information as the exact location, total depth, and technical specifications for actually drilling the well or wells should not be required in the Plan but should be a part of the "Permit to drill" application.

The requirement that an Environmental Report accompany each Exploration Plan is not a provision of the OCS Lands Act Amendments and is beyond their intention. This report is justified in the Supplemental Information section based on the premise that the Amendments require the Secretary to make decisions on the environmental impact of exploration. Yet the Secretary has, at this point, already had the benefit of an exhaustive pre-sale Environmental Impact Statement for the area, required by the National Environmental Policy Act. To call for additional, detailed environmental data during the exploration phase will lead to duplication of effort and wasted manpower and time.

Neither do the Amendments require an Environmental Report for a Development and Production Plan. Nor is one necessary. The Secretary is required, at least once in any area or region, to declare approval of a D and P Plan a major Federal action, which of course requires another Environmental Impact Statement. Here again, an

Environmental Report accompanying all Development and Production Plans is duplicative and a waste of effort.

Paragraphs (m) of 250.34-1 and (n) of 250.34-2 both permit the Director to "authorize and direct the lessee to conduct such geological, geophysical, or other surveys" he feels might be necessary to evaluate activities under an Exploration or a Development and Production Plan. These provisions should be deleted because they go beyond the scope and intent of the law.

Section 250.34-2, which covers Development and Production Plans, provides at the outset that no development or production may be commenced on a lease "in any area of the OCS" until such a plan has been submitted and approved. Yet Section 25 of the Amendments specifically excludes the Gulf of Mexico from this requirement. And the Conference Report, in its discussion of this requirement in Section 25, reiterates that it " * * * does not apply to leases, old or new, in the Gulf of Mexico." [page 115, Report No. 95-1091]. The wording of this regulation is clearly in conflict with the new statute as well as the expressed intent of Congress.

I would like to now comment on 30 CFR 252.7 which deals with confidential data made available to affected States through the OCS Oil and Gas Information Program. This section of the proposed regulations appears to ignore Section 26(c) of the Amendments, which provides that any regulations issued by the Secretary "shall include a provision that no such information will be transmitted to any affected State unless the lessee, or the permittee and all persons to whom such permittee has sold such information under promise of confidentiality, agree to such transmittal." Section 252.7 must be changed to include this requirement that the lessee agree to any confidential data transmittal to the affected States.

Parts (i) and (ii) of paragraph (a)(1) of 252.7 further provide that the Governor may designate an official to receive privileged or proprietary data and information, after receipt of nominations for leasing areas within three miles of the seaward boundary of a coastal State. However, Section 26 of the Amendments specifically states that a Governor may designate "an appropriate State official to inspect * * * privileged information." And it further states "that no such inspection shall take place prior to the sale of a lease covering the area." These proposed regulations must be rewritten. The amendments obviously intended for the States to have only the right to inspect, not to receive privileged information. The language of the proposed regulations should be changed to track the law exactly so there can be no misunderstanding. And any such inspection by the States is specifically forbidden prior to a lease sale. The right to keep proprietary data confidential is paramount if a competitive climate is to be maintained.

We appreciate the opportunity to offer what we feel are constructive comments regarding these proposed regulations. The need to maintain an open dialogue between industry and government was never more important than it is today.

However it should be clear that we are alarmed about the proliferation of regulations affecting our industry. The problem areas in the proposed regulations that I have outlined today, and which we will expand on in our written comments to be filed March 16, must be corrected.

Thank you.

The CHAIRMAN. Thank you, Mr. Langston.

Mr. Hughes?

Mr. HUGHES. Mr. Langston, do you have a copy of section 11(g) of 1614?

Mr. LANGSTON. No, I do not.

Mr. HUGHES. Are you familiar with the language of that?

Mr. LANGSTON. No, I am not.

Mr. HUGHES. Well, then, how can you make the statement, "Elsewhere in section 11(g) of H.R. 1614, the Secretary was specifically authorized to allow onstructure drilling"?

Mr. LANGSTON. We are saying that it was in and then was taken out.

Mr. HUGHES. You are saying that elsewhere in section 11(g) of H.R. 1614, the Secretary was specifically authorized to allow onstructure drilling. My question is: Have you ever seen section 11(g)?

Mr. LANGSTON. Yes, I have, Congressman Hughes.

Mr. HUGHES. What does it say?

Mr. LANGSTON. Would you please read the rest of that sentence?

Mr. HUGHES. I am asking you, what does it say. If you have read it, what does section 11(g) of 1614 say?

Mr. LANGSTON. I am sorry; I cannot tell you.

Mr. HUGHES. Well, I can tell you what it says, because I was the author of the section.

Mr. LANGSTON. All right.

Mr. HUGHES. It requires the Secretary of the Interior one time to offer onstructure drilling permits in the private sector; it mandated it. You are saying it did not?

Mr. LANGSTON. I am saying it did not.

Mr. HUGHES. Well, I am saying you are in error.

Mr. LANGSTON. Well, I am not sure your section got passed by the Congress.

Mr. HUGHES. Well, I can tell you it did get passed by the Congress, as a matter of fact, because I argued the section on the floor of the House. It was in the bill when it reached the conference committee. Sir, you are absolutely wrong on the issue; it is as simple as that.

What was eliminated from the conference report was the mandate that the Secretary, one time, try onstructure stratigraphic drilling. That was what was eliminated, and it was eliminated on the condition that we go back to the existing statutory language which, it was felt, gave the Secretary the authority to offer onstructure drilling. That was deemed to be sufficient, and that was the compromise that was struck in conference.

Mr. LANGSTON. You will have to agree then, sir, that any basis for his offering onstructure drilling in the private sector must be embodied in the OCS Lands Act of 1953, but not in this bill.

Mr. HUGHES. Well, it was the understanding at that point that we would go back to the existing language. I am telling you what the legislative intent was. You are talking to members here who were part of that conference committee and participated in the debate that took place in the conference. I do not know whether you were present at the conference committee or not. Were you?

Mr. LANGSTON. No, I was not.

Mr. HUGHES. I was, and I participated in that debate. One of the representations that was made by the Secretary at that time as we debated that subject, and it was one of the thorniest problems that we dealt with, was that the Secretary had such authority. Under the circumstances, it was felt that there was no need to continue debate on that issue.

Mr. LANGSTON. You would agree, though, that just because the Secretary thought he had the authority does not make him have the authority. That is a matter for the courts to decide, I suppose.

Mr. HUGHES. That is a long way from what you said earlier. You indicated that this committee intended that the Secretary not have the authority, and that is not accurate.

Mr. LANGSTON. I did not say "this committee"; I said the Congress.

Mr. HUGHES. Well, this committee is the committee that wrote the legislation. We went to Congress with it and worked out the differences between the House and Senate versions, and I would say that that is a pretty good indication of what our intent was—what I just described to you.

Mr. LANGSTON. I will not deny what your intent was.

Mr. HUGHES. No, no; what the intent of the committee was.

Mr. LANGSTON. Or even the majority of this committee; but it was not in the vote of the House.

Mr. HUGHES. Aside from that issue, the industry does not have to accept the permit. Nobody is going to force a permit upon Exxon or any other company that is not interested in prelease exploration on the Outer Continental Shelf. The only thing the Secretary is going to do is offer the permit; if you do not want it, you do not have to take it.

What is Exxon and some of the other companies afraid of that they are going to be offered something?

Mr. LANGSTON. You know, Congressman Hughes, as well as you are sitting there, that if one of these is drilled by anybody—and I do not have control over everybody—we cannot afford, if we are going to be competitive, not to be in it. That is my fear; somebody will accept it.

Mr. HUGHES. I believe that, too. I believe that there are a lot of companies out there that are interested in securing permits for onstructure drilling.

Mr. LANGSTON. That is my fear.

Mr. HUGHES. I know that that is your fear, and it is also your fear, I suspect, that some of these smaller companies are going to be able to participate a little more if onstructure stratigraphic drilling is offered, and that is one of the reasons why, first of all, this section was made available and that is why it is so important for the Secretary to move ahead with published regulations.

Mr. LANGSTON. There may be people who will do it. I would say that the vast majority of the oil industry and the people I have talked to are very concerned with this step. It only takes one.

Mr. HUGHES. I understand that. You know, it has only been the major oil companies that have expressed their distress over this permit. As you know, we presently sink cost wells offstructure, and I am satisfied that not only will the independents participate in this process, but Exxon will participate in the process; they will have to, because I believe that Exxon would not want any independents to get any information that they could not secure for themselves.

Mr. LANGSTON. You are absolutely right.

Mr. HUGHES. I believe that, too. Thank you, Mr. Chairman.

The CHAIRMAN. Mr. Forsythe?

Mr. FORSYTHE. Thank you, Mr. Chairman. I thank the panel. I am going to roam around here, I suspect, a little bit.

One of the issues that was discussed last week in the hearing was this question of due diligence. As I understand it, I think it is clear that the responsibility for regulation in this area rests with the Department of Energy. However, the Department of the Interior has stated that they were putting terms in leases at this time having to do with due diligence.

I would appreciate it if each of you would comment on the status of this situation. Do you believe that it is proper that due diligence be handled in leases without regulations having been promulgated and that a lease which demands that drilling will proceed within 2

years of the sale, when you have got a 5-year lease, is within your understanding of the way it should work?

Who wants to start? Mr. Hill?

Mr. HILL. Mr. Forsythe, I understand that they are considering a system which would require us to file an exploration plan in 2 years, which they would have the opportunity to approve. It suggests that if we do not commit to drilling a well in 2 years, then they would not approve a plan.

I believe we have a 5-year lease; we have 5 years to do what we need to do on that lease. If you look at exhibit No. 1 where I showed the 1970 lease sale, you can see that it is almost 2 years before we have peaked on the exploratory cycle. So at that point in time, I think the industry has been diligent, and then it takes a long time to analyze, to absorb, to rehash, and to reconstitute your ideas to see what you plan to do next.

That is why there is a trickling of exploratory wells spread out over the remaining 3 years of that project. To be specific and to commit myself to drill a well in 2 years, I believe I have got a 2-year lease then, not a 5-year lease. I would like the opportunity to use the full term of the 5-year lease to analyze all the opportunities that exist on that lease and surrounding that lease.

Mr. FORSYTHE. Mr. Langston?

Mr. LANGSTON. I do not think anyone can argue against due diligence. That is what we buy the lease for; we should proceed forward with exploring an area. But you do not explore an area by lease; you explore by prospect. One prospect might contain 10 leases, or it might contain several pieces of different prospects.

So to say you are going to drill on a specific lease at a particular time ignores the geologic facts of life. Now, they are asking us—it is in the proposed regulations—we will have to file an exploration plan in 2 years. Now, if this plan consists of the stuff we have got to go through today in filing an exploration plan to get out here and drill, the whole industry is just going to be eaten up with environmental reports and specifications of rigs; you have to commit what rig you are going to drill this thing with.

There is no question that you can file this enormous document; what good is it going to do? In my opinion, he cannot take your lease away from you, because you have got a 5-year lease; that is what the law gives you, a 5-year lease.

So we are fussing over something here, and we could all agree that we ought to proceed to explore. They want to mandate and help you decide how you are going to explore; that is, intolerable.

Mr. FORSYTHE. Well, I presume that there may be some thinking—and God forbid that I could really read the minds of the bureaucrats downtown—that there will be a shift to some other method of leasing that does not have front-end money. I believed that the bonus is one of the best incentives to guarantee that something will happen on a lease, is it not?

Mr. LANGSTON. I think so.

Mr. FORSYTHE. If you get a lease without putting up a large bonus and can wait until you actually begin production, you can kind of wait around.

Mr. LANGSTON. Look at the Baltimore Canyon. When we were finally turned loose after litigation and permitting, which is less

than a year ago, there were 11 wells drilled, 1 discovery, and there are 6 rigs operating out there. You know, what is due diligence?

If you have got front-end money on a thing, you can get on it and you process it. That is one of the key parts of front-end loaded bidding.

Mr. FORSYTHE. We both agree then that regulations on due diligence, in effect, actually could create less opportunity to produce energy than without them, and we would rest at the end of the 5 years and if you have not then done something, the extension of the lease is up.

Mr. LANGSTON. I think your lease normally has a 90-day drilling clause in it. If you are drilling over the term of the lease and it is a 5-year term, you have to not cease operations for more than 90 days in between. That is a very expensive way to maintain a lease; you just do not do that.

There is no way you can get on production in these frontier areas in 5 years. So there has got to be cooperation between the Department of the Interior and the industry in the decision of what due diligence is and what the development plans are; that gives you time to design and construct and put the equipment out there before you can get on production to hold that lease by production.

Mr. FORSYTHE. I had previously asked the gas industry about the 5-year lease schedule issued by DOI. I do not believe I need to repeat what happened last week. However, what is your reaction to the lease schedule that was published last Friday, and what effect is it going to have in the production of energy over the next 5 years, as compared to the DOE recommendation of 7 sales a year?

Mr. HILL. As I have indicated, I do not think we can produce the energy we need in this Nation unless we speed up and stick to six or seven sales per year. I also have some real problems with an optional sale. Does that mean I should get ready for it or I should not get ready for it? Do I wait until it has been decided a month before it is going to happen or do I sit back and hope that I am nearby and can do something about it?

It is going to be a very difficult plan for that type of a lease sale schedule. It should be a firm schedule. It should be planned to supply the energy, not planned to take care of the bureaucratic workload, let us say. Let us plan it because we need energy, and we need energy from these frontier areas very rapidly. We need to get on with those areas because of that 6- to 7-year delay.

We are talking about 1989 to 1995 energy now in some of these frontier areas, with that lease sale schedule.

Mr. FORSYTHE. Before I turn to Mr. Langston, let me have your reaction, Mr. Hill, on Mr. Langston's suggestion that the lease schedule should be the sole prerogative of the Department of Energy.

Mr. HILL. I am comfortable with that, if that is the way we go; yes.

Mr. FORSYTHE. You support that, as opposed to only recommendations from DOE to Interior?

Mr. HILL. It should be in one office to make that plan.

Mr. FORSYTHE. Mr. Langston?

Mr. LANGSTON. Well, I guess I could call it no plan if we started now, but that might be a little drastic. It is not the number of lease

sales that is really important; it is the quality of the acreage they put up. Where is the potential?

They asked the industry to submit rankings of the basins. We diligently worked on this thing for a couple of months to get it in, and then 2 months later they came out with a plan which would appear to have taken in all the environmental concerns but none of the potential concerns.

I just cannot imagine why it takes 2½ years from call of nominations to get a sale order. You know, they have got a nice little schedule here, but as Hank says, it looks like it is for bureaucratic convenience more than it is to try to explore the OCS.

The last one, for example, was Saint George. Now, I know the Saint George Basin is looked at as great fish spawning grounds and there are concerns, but some of us feel that it does have high potential. By this schedule, from this draft, it is 6 years to sale and 6 years to study. They even say in the thing that they probably will have to postpone it, because they will not have the studies done.

Even in the Gulf of Mexico, as I indicated, all of their lease sales have slipped from the 1977 schedule by approximately 2 to 4 months. Look at the 1980 sale schedule. What are we going to do the first half of the year in 1980? That is the first part of this program; the first sale in 1980 is in September and we have all four sales in that year—September, October, November, and December.

I do not see how industry or they can hold sales in that kind of a sequence, all piled at one end. They are getting themselves room to do their studies and their environmental impact statements.

Mr. FORSYTHE. I think that before I forget it, I should clarify the legislative history of onstructure drilling.

The House bill is where the mandate was, and that was stricken in the conference report. However, it was still left in the definition of the bill, so there is confusion because it was not deleted completely. But that does not take away from your questions and problems with onstructure drilling per se. I just wanted to be sure that the argument was not on misinformation as to what did happen.

Mr. LANGSTON. Well, maybe by using the definition—and that is what they are doing in the regs, changing the definition—they can claim they have rights under that. I would go back to the 1953 OCS Lands Act, if they have got any right at all. That is what my lawyers tell me; we have read it, too.

Mr. FORSYTHE. That is right, yes. I think we have pretty well covered onstructure drilling, unless either of you have anything you would like to add.

[No response.]

Mr. FORSYTHE. On the delays, this is the DOE production schedule which indicates, on page 114, that the minimum time in well-developed areas is now 31 months to issue OCS leases. They say the average in frontier areas would go to 35 for subsequent sales, and 44 maximum in sensitive areas. Would you agree with that?

Mr. HILL. It is much too long.

Mr. FORSYTHE. Well, would you agree that that is what it is?

Mr. HILL. Congressman, I have not seen that report. I am aware that it is proceeding in that direction, but I have not seen that report.

Mr. FORSYTHE. Your point is that it is much too long, and that is only to get the lease sale.

Mr. HILL. That is right.

Mr. FORSYTHE. What would you add to that 44 months, before you could go to production?

[Whereupon, Mr. Breaux assumed the Chair.]

Mr. HILL. In the Gulf of Mexico, I think you are talking about 3 years before the first production will start coming on. In the frontier area, it depends on where it is. On the north coast of Alaska, it may be 15 year from now.

Mr. FORSYTHE. Mr. Langston probably has had more experience in the frontier area, the offshore areas, and so forth.

Mr. LANGSTON. Well, we have made estimates. Indeed, this is another part of DOE's request; how long would it take to get on production and peak production. As I recall the numbers out of my head, in most areas, even in the Atlantic, it is going to take something like 6 to 7 years from lease sale, and in many of the Alaskan waters you are looking at 10 to 12 years, if you find what you are predicting that you might find.

So we are not talking about energy for tomorrow; we are talking about energy for 1990. At least our company projects we will be importing about 51 percent of our oil in 1990, even if we have an aggressive lease sale schedule and can find a good deal and if some of these frontier areas do come through. We have 50 percent of the domestic production coming out of those kinds of areas by 1990—no way, with this schedule.

Mr. FORSYTHE. Your study did not indicate where we are going to import that from?

Mr. LANGSTON. No. We do our balance that way, you know; you add what you have got and the rest of it has got to come from somebody else.

Mr. FORSYTHE. Thank you.

Mr. BREAU. Thank you, Mr. Forsythe. I apologize for not being here earlier. Unfortunately, I was trying to make some sense out of Alaska. Do you remember where that is?

I might cover some things that have already been covered; please tell me if they have already been asked. Would you compare the lease sale schedule that has just come out with prior lease sale schedules released not just by this Secretary but those released by other Secretaries, as far as the expedited process that this sale has as opposed to previous lease sales?

I am trying to get a comparison. Is it more accelerated or is it slower or is it about the same?

Mr. LANGSTON. Well, it has got more sales per year than the one they had in 1977. It has less sales than the previous administration's 10 million lease-type proposal.

Mr. BREAU. That was probably unrealistic; even industry would probably agree with that, is that not correct?

Mr. LANGSTON. Well, again, Congressman Breau, I would like to point out, it is not the amount of acreage, and we kept trying to tell that Secretary that, too. You know, 10 million acres is fine.

What you really would like to do, though, is be sure and get that 5 and 6 million acres a year up that has the potential. So it is not the amount of acreage; it is the potential you are putting up.

Mr. BREAU. Is the schedule that we are now looking at from the Secretary one that would strain the industry as far as the capabilities of rig availability and other physical requirements that industry would have from a technological standpoint?

Mr. LANGSTON. No. In fact, I am told that the offshore rig market is relatively soft right now, worldwide, and in the Gulf of Mexico where they are not getting long-term contracts, but two to three wells at a time, short-range contracts.

Mr. BREAU. Assuming there was a more aggressive lease schedule adopted, would the industry be able to participate in such a schedule in the sense of being ready and willing to participate in the process of bidding and also, if you get the lease, willing to develop it?

Mr. LANGSTON. I can assure you that speaking for my company, we are ready to go forward with this thing at the fastest possible rate that we can go through the required processes, and there are required steps we are going to have to go through.

In the rig situation, it only takes about a year to drill an offshore rig—maybe 12 to 18 months. If you start scheduling things out here 2 years from now, you can build all kinds of rigs if you know you are going to have some use for them.

I would remind you, however, that we built a \$50 million rig that we ran out of places to use in Alaskan waters last spring. We shipped it to Brazil, because the lease sale schedules did not come along as we had anticipated. You cannot do that sort of thing.

Mr. BREAU. I read in yesterday's newspaper that Secretary Andrus had indicated that he was very disappointed at the lack of an aggressive development program on existing leases that the companies had. In other words, he was, in a way, throwing it back to industry, saying, "It is no use for us to lease any faster, because they are not actively exploring the existing leases that they have." What is industry's response to his accusation?

Mr. LANGSTON. Again, I cannot talk for industry. But the Baltimore Canyon is an example of how rapidly we have gotten going after exploring that. In the Gulf of Mexico, I have a list of our leases, but by the end of this year, we will not have a prospect that has not been drilled—I will not say every tract, but a prospect that has not been drilled, except in maybe four or five instances which are in our drilling program in the first part of April.

So we are currently actively carrying seven rigs at about a half a million dollars a day in the offshore. I think we are fairly aggressive.

Mr. BREAU. What would prompt him to say that, other than just missing the boat and really believing it? Do you have any idea? They published a lease sale and there are four to five to six sales a year in these areas, and I guess as a justification for that, he is saying, well, industry is not even developing the ones that they have.

Would there be an industry group that could respond to that? I hate to let that serious an accusation go by the wayside without having someone speak for industry or provide a response to that,

because that is the key question. We are not going to be able to tell them to lease faster if they say, well, companies are not doing anything with the leases they already have; why should we go faster.

I think it would be very helpful if industry has that type of information, or a summary of it, that could be provided. I do not mean today, but I think it would be helpful if that could be put together from the industry's perspective.

Mr. LANGSTON. At the last foray on this due diligence thing, EPI sat down and tried to do an industry study. I am sure that that is available; it was sent to the Secretary, anyway. I am sure it would be available.

Mr. BREAU. Would that be responsive to his accusation that they are not being developed expeditiously?

Mr. LANGSTON. We thought so, although each company has to speak for itself. You can do this kind of as a package, but then each company has to reply on these kinds of issues almost individually.

Mr. BREAU. Mr. Hill?

Mr. HILL. Let me respond a little bit to a portion of that.

It depends on your preconceived notion of what due diligence is. If there is one undrilled lease in the Gulf of Mexico, I believe some will say the industry is not diligent. But there are going to be, for instance, in the Baltimore Canyon, several undrilled leases because of the results of the first drilling. Those leases may not get drilled in the first year and they will remain on the books while we restructure our leads and determine if we should drill more holes. So almost in any period of time, there will be undrilled tracts.

It does not mean people are not following up and trying to find a place to drill.

I think the API has determined the number and it is a very minimal number of tracts that are undrilled at any point in time.

Mr. BREAU. I think last Thursday, a representative of the Department was asked how many structure rigs had been planned, and he informed the committee that there had only been two plans submitted to date.

When asked why so few plans have been submitted, the answer was that you in industry have to clear plans with several different shops and agencies. I think one of the intentions of this Congress was that it was supposed to be a one-stop process in which you would take your information and plans and settle the matter within one part of the bureaucracy.

Has that been a problem? Has the regulatory process had somewhat of a hampering effect on the exploration plans?

Mr. LANGSTON. Maybe I can answer, because one of those exploration plans is an Exxon plan.

Let me give you our history on that.

That sale was in March of last year. It was issued in June of last year. We had anticipated this plan process to be very effective; you go to DOI and you tell them, I am going to drill so many holes to try to explore this area.

Well, in the evolution of this exploratory plan theory, they said, no, you have to cite specific environmental reports on exactly what you are going to put in that hole.

You have to have specific regulations of the—specific down to the last bolt. Those usually end up without making the two of them. Then the exploration, or what I call the guts of the exploration plan is that they tell us—what the hell are you going to do?

All of this has been distributed to the States, affected States, even though they don't have a coastal zone management plan. He is doing this already. You have to have EPA discharge permits, get that approved. Then you have to have the Coast Guard and other types of approval that I don't think we can ever depend on DOI to take care of, all of those things.

Mr. BREAU. None of those requirements are new requirements, are they?

Mr. LANGSTON. I would say they are new. They are new out of regulations that they promulgated just before the Georgia Bank sale, which was put off to try to get that lawsuit settled, which a number of us attacked.

We also wanted to satisfy—we can't tell how burdensome it will be. This was in anticipation of what you fellows were going to pass in the Land Act amendments.

These amendments are those same ones revised to try to meet this. What we are trying to do is get out of the way, get out of those regulations, those things that we think are overly burdensome and really don't have anything to do with what you are trying to do, which is find the oil and gas.

Mr. BREAU. Are there any other statements?

Mr. HUGHES. I just have one more question.

Mr. Langston, did Exxon participate in the second lease sale, lease sale No. 49, in the mid-Atlantic?

Mr. LANGSTON. Yes.

Mr. HUGHES. There was some feeling that the lease sale was somewhat disappointing because of the interest that was demonstrated by the companies.

Do you agree with that assessment?

Mr. LANGSTON. If I could put it in some context, we think that the major potential in that area, local area, was put up in the first sale. The most obvious structures—that is not to say we don't see further policy in some of the other tracts with lesser potential. But what happens is that it is—it doesn't surprise me when you get \$2 million for a tract and even a structure is going for \$100 million. So it is a judgment of the quality of the tracts that are being put up. So there is no question that the quality has been questioned at this point.

We have stated publicly we are not giving up. We are posting two rigs out there. We are operating four out of the six.

Mr. HUGHES. Did the industry have enough time to study lease sale 49? There was a delay of the better part of the year, caused by the litigation in the Baltimore Canyon and the second lease sale, lease sale 49, was not deferred to adjust for the litigation. There was some suggestion by industry that there just wasn't sufficient time to assess the information from the first lease sale.

Do you agree that that was perhaps part of the problem?

Mr. LANGSTON. As long as we are still drilling, there is going to be additional information. We have a great deal of information because of our aggressiveness in our first operations.

Mr. HUGHES. It was only in December that a cost well was determined to contain significant shows of hydrocarbons. Lease sale 49 took place within 2 months of that particular show.

Is that really sufficient time to analyze what that particular find might have been?

Mr. LANGSTON. Certainly for the people that ran the cost well, it was. I guess that hasn't been published yet. It has not been published yet. I couldn't comment.

Mr. HUGHES. So you don't feel that timing was a significant factor in the lack of interest in lease sale 49?

Mr. LANGSTON. What?

Mr. HUGHES. The timing?

Mr. LANGSTON. Cost well timing, no.

Mr. HUGHES. How about general time, insofar as the time between onstructure wells that are now in process and lease sale 49? Was there ample time to analyze what the industry is securing by way of data from present wells that are being sunk in the Baltimore Canyon through prior to lease sale 49?

Mr. LANGSTON. You will never get me to say you shouldn't have lease sales as fast as they can. If they can get it up, let it come. We will take our chances.

Mr. HILL. May I respond to part of that?

You run an additional risk—Texaco announced the second well was dry. It would be interesting to see what the lease sale would bring today.

There were a group of people who counted on Texaco to find something. That is going to happen all of the time. There are going to be successes and failures all along. It is difficult to find a time that is good to have a lease sale. If you are going to put that kind of money on a lease sale, that money is digested.

Our company was bitter and a big loser on the first lease sale, \$85 million, and yet we are back for more of that good deal. It doesn't hurt when you have the lease sale. I think we would be there if we thought there was any potential in the area.

Mr. HUGHES. That is why we are encouraging some prelease exploration so we could save you some money.

Mr. HILL. The Baltimore Canyon sale would be an interesting site to test the offstructure drilling concept. If the first well drilled on the crest of stone dome was dry—would the other tracts be offered and would the Texaco and the cost well ever be drilled?

Mr. HUGHES. In the Baltimore Canyon, if you are going to find anything you have to sink wells onstructure generally.

Mr. HILL. You sink a lot.

Mr. FORSYTHE. As pertains to lease sale 49.

The removal of those 40-odd tracts from the sale as a result of the mudslide situation, did that have a deflating effect on the sale?

Mr. LANGSTON. Obviously, there would have been companies interested in bidding on that. Whatever that amount might have been, it deflated it that much. Again, I would like to say, these are engineering problems. We find significant oil and gas, even if there are some difficult conditions. You get a platform on here and drill on to the bad area. It is overplayed as to how you can engineer around those kinds of conditions.

Mr. HILL. If you are not given any opportunity to develop that engineering specialty, it will never be developed. You have to offer those tracts at some point in time if you believe there is energy there and let the engineers design. If they don't have the challenge, they won't design the equipment.

Mr. FORSYTHE. Thank you.

Mr. BREAUX. We thank both of you. We think that information provided has been very helpful and we appreciate you being with us this afternoon.

Our next group of witnesses will be representatives of the Department of Transportation and the U.S. Coast Guard.

STATEMENTS OF A PANEL CONSISTING OF CAPT. FREDERICK SCHUBERT, ACTING CHIEF, OFFICE OF MARINE ENVIRONMENT AND SYSTEMS; COMDR. PETER CRONK, MANAGER, OUTER CONTINENTAL SHELF PROJECT BRANCH, U.S. COAST GUARD

Mr. BREAUX. Chairman Murphy asked you to be prepared to answer questions that the committee may have.

Penrod's Rig No. 30 located in the Gulf of Mexico, right off the coast of my congressional district, caught fire on March 5. The information we have at the present time is that something like five companies were involved with the drilling operations. Unfortunately, it was a very serious tragedy, not only due to the loss of equipment and operations but also the tragic death of a number of men who were operating on that rig.

Could you give the committee a report of what information you have at this point as to the damage and loss of lives?

Captain SCHUBERT. The investigation is being done by the Coast Guard and the Geological Survey as to the cause of it. I believe it is somewhat premature to jump to conclusions as to what actually happened.

However, Commander Cronk, of our OCS project is prepared to discuss what we know at the present time.

Commander CRONK. Congressman, presently there is a joint investigation by the Coast Guard, formal investigation by the Coast Guard and the Geological Survey under the authority of the OCS Lands Act. There were 8 dead or missing persons and 27 people who survived that casualty. The 27 abandoned the platform safely. The purpose of the investigation is to determine the cause and the extent of damage and so on; and I don't have that information.

Mr. BREAUX. What was the general extent of the damage to the platform? Was it a fixed platform?

Commander CRONK. It was a platform rig on a fixed platform which was drilling a development well. There were other wells in service at the time.

Mr. BREAUX. Approximately how long did the fire continue after the explosion?

Commander CRONK. I couldn't say. I don't have that information.

Captain SCHUBERT. We can provide that for the record.

Mr. BREAUX. At what point are you in the investigation?

Commander CRONK. There have been a number of supervisory people that are part of the drilling operation and platform person-

nel who have been interviewed, interrogated, at the investigation, and they are going through a series of witnesses.

Mr. BREAU. It is 9 days after the explosion and you don't even know yet how long the fire lasted?

Captain SCHUBERT. We have the information but we don't have it at our fingertips. I believe it was 5 days, but I am trying to recall it from memory.

Mr. BREAU. Let's talk about the operation.

When was the last time that particular rig was inspected at that location?

Commander CRONK. The Coast Guard inspected the platform in a routine inspection on January 27.

Mr. BREAU. It was at that location at that time?

Commander CRONK. Yes. It was a fixed platform.

Mr. BREAU. Was that a no-notice inspection or a planned regular inspection?

Commander CRONK. That was a planned, regularly scheduled inspection.

Mr. BREAU. You had never done a no-notice type of inspection on that rig?

Commander CRONK. I couldn't say; may have been. But we checked on the inspection date and it was a regular inspection on the 27th.

Mr. BREAU. What were the findings of that rig inspection that you had conducted?

Commander CRONK. I have no information on that, but we can provide the information.

Mr. BREAU. Where do you work?

Commander CRONK. I work in Washington.

Mr. BREAU. So you didn't conduct the inspection?

Captain SCHUBERT. This inspection was conducted by the Marine Inspection Office in New Orleans. For the record, the fire occurred at approximately 0600 on March 5 and was extinguished at 0830 on March 6.

Mr. BREAU. It lasted for about 14 hours?

Captain SCHUBERT. Yes. My 5-day estimate came from March 5.

Mr. BREAU. Has the Coast Guard conducted any inspections of a no-notice type on that operation within, say, the last 6 months, not on this particular rig, but on the rigs in the Gulf of Mexico?

Captain SCHUBERT. We have considerably increased the pace and scope of our inspection program in the gulf. In the last 3 months of last year, over 300 platforms were inspected. Many additional inspections were conducted. Some could have been of the no-notice variety. Most were scheduled inspections, though.

Mr. BREAU. You have, I take it, a planned inspection schedule that notifies platforms that you will inspect them, say, on Wednesday of a certain week?

Captain SCHUBERT. Yes, sir. The inspection team that goes out there has an itinerary in advance to handle logistics.

Mr. BREAU. Of the inspections, what percentage would be regularly scheduled and what percentage would be no-notice?

Commander CRONK. For the most part, our intent is to cover every platform on the gulf and try to get at least an annual inspection requirement. There are occasions when it is necessary to

go back to a platform, and that might be done on an unannounced basis. But the thrust of our program is to bring all platforms, rigs, on the OCS, under an inspection program which is at this point a growing program.

Captain SCHUBERT. I would like to add, as we develop a history of inspections, we will be able to detect where the problem situations exist to give us a better handle on where we need to conduct the no-notice inspections to assure compliance.

Mr. BREAU. Could you provide, since we are not sure what that report indicated, a copy of the report, the last report conducted on Penrod's Rig No. 30, the one you had conducted a couple of months prior to the accident?

Captain SCHUBERT. Yes, sir.

[The information follows:]

COAST GUARD REPORT ON PLACID OIL CO. AND PENROD'S OIL RIGS

Coast Guard's inspection reports for the Placid Oil Company platform 281-C and the platform drilling rig Penrod 30 which were inspected on 26 January 1979. Those reports are included in the matters being examined by the investigative body.

MCCANN CITY
INSPECTION RECORD OF ARTIFICIAL ISLAND OR FIXED
STRUCTURE ON THE OUTER CONTINENTAL SHELF

COMPANY PLACID OIL CO.DATE 26 JAN 1979STRUCTURE DESIGNATION 281-CNUMBER OF PLATFORMS IN COMPLEX 1

Phone

504-868-0008 - DIR.

WITH PEARO RIG #30

1.	Time of inspection	0930
2.	Owners' designation if different than above	FIELD 57-268
3.	Name of lessee	PLACID OIL CO.
	Name of offshore area	SOUTH MARSH IS.
	Number of blocks	281
	Designation (if any)	C
4.	Above marked in 12" vertical block letters and numbers on diagonal corners of structure and on heliport	yes
5.	Owner/Address	PO BOX 4076 HENRIETTA, LA.
6.	Operator/Agent/Address	same
7.	Structure Type/Production, drilling, quarters etc.	PRODUCTION & QUARTERS
8.	Persons living & accom. on	Capacity: 54 Number aboard: 57 31
9.	Person in charge/title	K W BRIAN / TRAINING PLANT MAN REG. N. PLANTS / PRODUCTION
10.	Primary Means of escape Fixed structures/fixed ladders	2 ladders - 2 stairs
11.	Secondary Means of escape/Type	N/A
12.	Personnel Landings/Transfer Facilities/Landings/Guards/Rails/ Illumination for Landings.	c/r
13.	Guards/Rails Perimeter of floors, decks & openings. Unprotected perimeter of helicopter deck	replace hand rails perimeter of heliport. Need to be board on intermediate rail near cabin. & clear perimeter of hand rails area.
14.	Catwalks/Stairways/ Guards/ Rails	c/r
15.	First Aid Kit	c/r C.G. PARK.
16.	Stores Litter or substitute	c/r

Fire Fighting Equipment

LOCATION	REQUIREMENT	REQUIRED		ON HAND	
		NO.	CLASS	NO.	CLASS
Comm. Corridors	1 AII/150ft.				
Radio Room	1 CII/near exit				
Sleeping Accom.	1 AII/ over 4 bunks				
Galley	1 B/CII ea. 2500 sq. ft.				
Store Rooms	1 AII ea. 2500 sq. ft.				
Boilers/ Glycol heaters	2 BII 1 BIV (if no fix CO ₂)				
Generator Room	1 BII ea. eng.	3	B II		
Compressor Room	1 BII ea. eng.				
Pump Room	1 BII ea. eng.				
Ele mtrs/ Gen (open)	1 CII ea 2 mtr				
Int. Comb. Eng. in open	1 BII Ea. 3				

Date discharged, refilled weighed ✓
 Hydrostatic test date ✓

Non-required Equipment

Hose stations /// Type Pump DEEP WELL Pump Drive DIRECT
 Light Water Stations AUTO

Fire extinguishers in non-required locations
 NO. Type Location

~~744~~ None APP B/C IV Various.

NEED ¹CG APP BII
 need 1 CG APP.
 GEN Room

17.	Emergency Communications Equip. Radio and/or wire telephone	REMARKS VHF RADIO. PORTABLE FM.		1									
18.	Life preservers, number <u>111</u> proper stowage Markings	~~WITH PINK 11~~		2									
19.	Workvests, number Separate stowage	<u>111</u> <i>af</i>		3									
20.	Ring Life Buoys, number Electric Waterlight w/lanyard Fitted in bracket Arrangement on platform Markings	THH <i>af</i> NEED TO MOUNT ON PROJELEVEL.		4									
21.	Lifefloats or Allowable Substitutes	Capsule should Capacity Hook UP AIR VENT HOLE NEED HATCHET		5									
		<table><tr><td>ITEM</td><td>NUMBER</td><td>CAPACITY</td></tr><tr><td>CAPSULE</td><td>1</td><td>25</td></tr><tr><td>LF</td><td>2</td><td>12 man</td></tr></table>		ITEM	NUMBER	CAPACITY	CAPSULE	1	25	LF	2	12 man	
ITEM	NUMBER	CAPACITY											
CAPSULE	1	25											
LF	2	12 man											
<u>2. 4TH 454</u> Capsule or Boat Serial #'s Location (outboard sides) Markings (11")				6									
22.	Lifefloat Equipment Painter Electric waterlight Pailies (2)	<i>af</i>		7									
23.	Inflatable Life Rafts Painter Label												
Manufacturer Capacity Service Date		N/A - PLANKED HAS											
24.	General Alarm System Audible in all parts of platform Markings/bell & switch 1" red	ON CAPSULE BY CAPSULE. NOT MARKED REPAIR ALARM SWITCHES ON LOWER LEVELS											
25.	Emergency Drill Records	Heli <u>111</u> Comments: PAILIES HELD IN PLACE -											
26.	Fog Signal/Operational/Type	<i>af</i>											
27.	Obstruction Lights Number/Operational	<u>1111</u>											

28. In my opinion all provisions of the applicable regulations have been complied with and the emergency equipment is in good condition and satisfactory in every respect, *with exceptions of noted deficiencies*

J. M. Allen

Signature of USCG Inspector

29. Additional Remarks

STATION BILL - POSTED - OK -

OCMI NOLA 10-78

*chr. white*INSPECTION RECORD OF ARTIFICIAL ISLAND OR FIXED
STRUCTURE ON THE OUTER CONTINENTAL SHELF

FRANK PENNED Drilling CO

DATE 26 Jan 79

STRUCTURE DESIGNATION ~~SMI~~ Penned 30 on SMI-568-C

281

NUMBER OF PLATFORMS IN COMPLEX 1

504-868-0008 Dist 2

Time of inspection	0930	
Owners' designation if different than above		
Name of lessee	Penned CO	
Name of offshore area	South Marsh Island	
Number of blocks	~~285~~ 281	
Designation (if any)		
Above marked in 12" vertical block Letters and Numbers on diagonal corners of structure and on heliport	OK	11
Owner/Address	P.O. Box 52268 O.C.S. Lafayette, LA 70505	12
Operator/Agent/Address	PRIMO OIL P.O. Box 4096 Houma, LA	13
Structure Type/production, drilling, quarters etc.	Drilling/Quarters	14
Persons living & accom. on	Capacity 52 Number aboard 31	15
Person in charge/title	Earl Baudoin Jr Toolpusher	16
Primary Means of escape Fixed structures/fixed ladders	2835 Issued Clear all obstruction to Ladder before "OK" signal	17
Secondary Means of escape/Type	none 2835	18
Personnel Landings/Transfer Facilities/Landings/Guards/Rails/ Illumination for Landings	Platform SMI-568-C	19
Guards/Rails Perimeter of floors, decks & openings. Unprotected perimeter of well water deck	2835 Issued To be used on all guards	20
Catwalks/Stairways/ Guards/ Rails	MADE RAIL OUTSIDE HELIPORT ONE LANDING 2835 Issued	21
First Aid Kit	2835 Issued	22
Stones Litter or substitute	OK	23

REMARKS

Fire Fighting Equipment

LOCATION	REQUIREMENT	REQUIRED		ON HAND	
		NO.	CLASS	NO.	CLASS
comm.	1 AII/150ft.	11	AI	1110	AI B C II
corridors					
radio Room	1 CII/near exit				
sleeping	1 AII/over	4411	AI		835
ccom.	4 bunks				
alley	1 B/CII ea.	1	B/C II	1	BC
	2500 sq. ft.				one required 835
tore	1 AII ea.	1	AI		store & laundry/ Galley 5
ooms	2500 sq. ft.	1	BC II		835
oilers/	2 BII				PAINT LOCKER
lycol	1 BIV (if no fix				835
aters	CO ₂)	none			
enerator	1 BII ea. eng.	44	BC	11	BC II 835
com					AI B C II
ompressor	1 BII ea. eng.				Shop 1 ABC II ok
com		none			
ump	1 BII ea. eng.				
com		none			
le mtrs/					
en (open)	1 CII ea 2 mtr				
nt. Comb.	1 BII Ea. 3				
mg. in		none			
pen					
CRANE	1 BII EA	11	BC II	1	BC II

Date discharged, refilled weighed
Hydrostatic test date

Non-required Equipment

Hose stations 1111 Type Pump Submarine Pump Drive Electric
Light Water Stations on deck

Fire extinguishers in non-required locations

NO.	Type	Location
1	BC II	DRILL FLOOR
11	BC III	MUP P. & F. INT

835 Issued
#2 located ON FIRE STATION

835 Issued
Below DRILL FLOOR
NON APPROVED FIRE EXTING. IN
GENERATOR ROOM NEED RECHARGE

[illegible]

8. In my opinion all provisions of the applicable regulations have been complied with and the emergency equipment is in good condition and satisfactory in every respect, except as noted on 8354

Edward G. Bradley
Signature of USCG Inspector

9. Additional Remarks

Main office

Pinarod Drilling Company

3333 First NATIONAL BANK Building
Dallas, TX 75202



DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD

MAILING ADDRESS
U. S. COAST GUARD (G-CC/104)
WASHINGTON, D. C. 20590
PHONE: 202-426-4280

5700

2 APR 1979

Honorable John J. Murphy
Chairman, Committee on Merchant
Marine and Fisheries
U. S. House of Representatives
Washington, DC 20515

APR 3 1979

Dear Mr. Chairman:

Thank you for your letter of 21 February 1979 concerning the implementation of the OCS Lands Act of 1978. I appreciate the opportunity to address this subject. As you know, in the last few years the Coast Guard has been tasked with many new duties and responsibilities in the maritime sphere. A partial list would include, in addition to the OCS Lands Act Amendments of 1978, the 1977 Presidential Initiatives on Tanker Safety and Pollution Prevention (including the Foreign Tanker Examination Program), enforcement of the 200 mile fisheries conservation zone, the Clean Water Act, the Deep Water Ports Act, the Port and Tanker Safety Act of 1978 and a significant increase in our drug interdiction activities on the high seas. We have accomplished this partially through new appropriations and partially through reprogrammings from existing programs and support activities. We cannot, however, continue indefinitely to take on new tasks without the accompaniment of sufficient new resources. The OCS Lands Act Amendments of 1978 is a case in point.

We have carefully analysed the impact of this Act on the Coast Guard and have developed the budget estimates required for its enforcement. This data, which responds to the specific questions addressed in your letter, is attached. Our resource estimates are based where possible, on existing experience. However, for many of the new tasks included in the Act there is scant experience and requirements were developed through the analyses and interpolation of data from similar activities in related fields. Of necessity we are proceeding cautiously with this budget request to insure its validity and are carefully assessing the impact of these resources on program operations and support activities. There is particular concern with this because of the nature of the resources which are required.

The implementation of the OCS program will require the addition of new marine inspectors. This is a high skills occupation which normally requires three years indoctrination once the prerequisite shipboard training has been obtained through sea duty. The time frames specified for the implementation of many of the tasks within the new Act do not allow us the lead time necessary to develop qualified personnel. At the same time there do not exist outside of the Coast Guard large numbers of individuals who possess the necessary marine experience and are available for recruitment.



It's a law we
can live with.

G-CC/104
5700
2 APR 1979

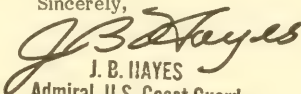
Subj: Reply to Congressman Murphy's letter dated 21 February 1979
concerning the Outer Continental Shelf Lands Act Amendments of 1978

Thus even if all of the new billets which may be necessary to fully implement the Act were provided in appropriations, we would still be faced with a serious reassessment of priorities to determine the other program areas from which to draw the necessary qualified personnel. There is concern that a too rapid implementation of the new OCS Act may adversely affect our experience level so as to warrant serious question as to our ability to accomplish our safety objectives.

We understand the necessity to expeditiously implement the new OCS Act. You are aware that the Coast Guard has taken steps in this direction. We are confident that, with receipt of the necessary resources, we can implement the most important features of the Act within time frames that will meet the intent of Congress. As you requested, our current status and future requirements are summarized in the enclosures. The need for a 1980 budget amendment is currently under consideration in the Department. When final determinations are made under the regular budget formulation process, more specific information will be provided your committee. Additionally, in implementing the provisions of the law over the next few years, we will gain the experience essential to establish firm resource requirement costs in place of the preliminary estimates we are now providing.

We look forward to the challenge of this important legislation and to our continued cooperation in its enforcement.

Sincerely,


J. B. HAYES
Admiral, U.S. Coast Guard
Commandant

Encl:

- (1) Budget Data, OCSLA 1953 and ongoing activity ('78, '79)
- (2) Estimates of OCSLA future resource requirements
- (3) Budget data, OCSLA Title III

TITLE II
OCS LANDS ACT OF 1953 AMENDED
SUMMARY
APPROPRIATION/OUTLAYS (\$000)

Operating Expenses

Item	Positions		1/ Amount
	Military	Civilian	
PREVIOUSLY FUNDED AND ONGOING:			
1. FY 1978/1979:			
a. Personnel costs (78-M-23-C-5; 79-M-23)....	46	5	\$981
b. Leased helicopter program.....			1,227
c. OCS training school.....			70
d. Program administration studies.....			306
Total previously funded.....	46	5	2,584

1/ Obligations and outlays will equal appropriations.

JUSTIFICATION

The Coast Guard, under Titles 43 and 46, U. S. Code, is charged with regulation and inspection of fixed and mobile structures on the Outer Continental Shelf (OCS) to ensure a safe and environmentally sound operation. The energy crisis and the political climate placed top priority on an accelerated development of petroleum resources on the domestic OCS. In FY 1977, only 80 of 2400 OCS facilities were inspected by the Coast Guard due to resource limitations. For FY 1978 and FY 1979, minimum objectives were established to inspect all manned platforms (370) and all mobile drilling units (125) and commence inspections of unmanned major platforms. At the end of FY 1977, 4 military billets and 1 civilian position were reprogrammed to permit establishment in early FY 1978 of an Outer Continental Shelf Safety Project Staff. The purpose of this operation was to establish a single focal point within the CG to coordinate all OCS activities and programs, including liaison with other Federal agencies having responsibilities on the OCS. Appropriations amounting to \$2,584,000 provided for field marine inspectors, program administration, leased helicopters, and training. The number of personnel funded were 46 military and 5 civilian.

TITLE II
OCS LANDS ACT OF 1953 (AMENDED) ESTIMATES OF FUTURE REQUIREMENTS
APPROPRIATION/OUTLAYS (\$000)
THREE YEAR PERIOD

ITEM	OPERATING EXPENSES			1/	AC&I
	POSITIONS		AMOUNT		
	Military	Civilian			
1. Personnel Costs.....	247	28	275	\$5,738	
2. Leased Helicopter Program.....				3,090	
3. Personnel Records System.....				850	
4. Training.....				170	
5. Program Administration.....				100	
6. Pre-construction Costs (Morgan City, La.)....					\$3,000 ^{2/}
Total	247	28	275	9,948	3/
					3,000

1/ Obligations and outlays will equal appropriations.

2/ Site acquisition and engineering survey costs only. Additional funds estimated to be \$9,000,000 will be required to construct MSO after completion of engineering survey.

3/ Additional estimated recurring costs after full implementation.

OCSLA TITLE III
OFFSHORE OIL POLLUTION FUND
1979 SUPPLEMENTAL/1980 BUDGET REQUEST
(in thousands of dollars)

	<u>To DCT</u>	<u>Approved by OMB</u>
FY 1979 Supplemental Budget Request		
Budget Authority		
Appropriation	5,000	5,000
Authority to Borrow	55,000	55,000
Total	<u>60,000</u>	<u>60,000</u>
Personnel		
Military	0	6
Civilian	28	22
Budget Authority/Obligations/Outlays	9,000	8,000
FY 1980 Budget Request <u>1/</u> <u>2/</u>		
Budget Authority		
Appropriation	12,000	12,000
Authority to Borrow	0	2,000
Total	<u>12,000</u>	<u>14,000</u>
Personnel		
Military	0	6
Civilian	28	22
Budget Authority/Obligations/Outlays	12,000	14,000

1/ In the event of a catastrophic spill, additional funds may be borrowed, but in no event may obligations exceed \$50 million.

2/ Full year shown. Effect of passage of proposed Superfund legislation would be to reduce dollar figures by 50%.

Program Justification

The Outer Continental Shelf Lands Act Amendments of 1978 requires the Coast Guard to perform additional Marine Safety and Environmental Protection missions on the Outer Continental Shelf. Title III of the law provides for an oil pollution compensation fund to pay compensation for damages, including cleanup, resulting from oil spills.

There are about 2200 platforms on the Outer Continental Shelf which produce approximately 300 million barrels of oil annually. There are about 1500 spills each year with a total volume of 10,000 barrels. It is estimated that about 300 spills per year will lead to claims.

Mr. BREAUX. We have problems, at least during the hearings, on writing the legislation. Captain Schubert had indicated that you felt that there would be some problems keeping up with the schedule and the intent of the committee and the legislation with regard to the amount of inspections we would be having.

I take it the problems would be with reference to your consideration about manpower and money in order to do what you have been told to do by the Congress.

Since then, we have been requested by Admiral Hayes, regarding the budget request, to provide an adequate budget to achieve the purpose that Congress intended you to achieve.

Could you bring us up on the status of the budget request for additional manpower or whatever the request was? First, tell us what the request was, not only in dollar terms, but also in terms of manpower needs.

Captain SCHUBERT. An increase of money, especially, and also for certain services that would be procured, such as helicopters and additional equipment.

Mr. BREAUX. Does the Coast Guard contract out for helicopters?

Captain SCHUBERT. Yes.

Mr. BREAUX. You don't have any?

Captain SCHUBERT. We do have several aircraft, but generally speaking, we contract for this type of service.

Mr. BREAUX. So the request was for additional manpower, and also for additional funds, I guess, to acquire the support necessary?

Captain SCHUBERT. Yes.

Chairman Murphy has submitted a letter to the Commandant requesting that this information be provided in detail. That letter is in the final stages of preparation and we expect to have it soon.

Mr. BREAUX. Where are we with regard to the budget and OMB and the request through the Department of Transportation for your additional needs?

Captain SCHUBERT. We are in the process of preparing with the Department of Transportation an amendment to the fiscal 1980 budget which will reflect a phased program to meet these needs.

I would like to expand a little bit on the need for a phased program, particularly in the area of personnel.

The type of trained individual that we need to conduct these investigations and inspections is not readily available off the street. A certain amount of training is required.

For instance, we have acquired a certain limited number of personnel in the fiscal 1978, fiscal 1979 budgets. If my memory serves me, we had 51 positions, 46 military, and 5 civilian, provided in those 2 fiscal years.

In the first fiscal year, we had 32 positions. Those people are trained and on board right now. However, the remainder, the balance of that 51 positions, are in the process of being trained at the present time and won't be up to speed and ready to be utilized until September.

Mr. BREAUX. What positions?

Captain SCHUBERT. Inspectors and investigators.

Mr. BREAUX. For OMB?

Captain SCHUBERT. For our OCS inspection and investigation responsibilities.

Mr. BREAU. And how many do you have in the total program in operation now? How many inspectors, approximately?

Captain SCHUBERT. We have the 32 that are out there now, plus we have additional resources that are provided in 1979 for training.

Mr. BREAU. How many do you have on line?

Captain SCHUBERT. Thirty-two.

Mr. BREAU. Thirty-two in service?

Captain SCHUBERT. Yes.

Mr. BREAU. How many additional will you be acquiring when you complete the update? How many more will you get?

Captain SCHUBERT. Nineteen this fiscal year.

Mr. FORSYTHE. Earlier today, we heard from Mr. Wallace that NOAA, which has authority to conduct a study of diving safety on OCS under the provisions of Public Law 95-372, is prepared to promulgate regulations on diver safety.

Under sections 21 and 22 of Public Law 95-372, the Coast Guard has clear lead-agency jurisdiction over health and safety and in fact has promulgated diver safety standards.

I would appreciate your comments on this matter and what difficulties you perceive in enforcing your standards.

Captain SCHUBERT. I think there may be a bit of confusion as to just exactly which agency is conducting diving studies versus issuing the regulations. I fully concur with your observation that the Coast Guard is the authority to issue the regulations.

NOAA is charged, I believe, under section 21(e) of the act, to conduct studies in cooperation with the Secretary of the department in which the Coast Guard is operating and also, with NIOSH. Certainly, the results of these studies would be used as a basis for promulgation of any amendments to existing Coast Guard regulations on the subject.

However, we would follow the Administrative Procedures Act and certainly would invite any input from the public, including the industry, that would be necessary. As I understood the comments that were made previously, there was some question as to whether there would be any industry input on the studies. I believe I would have to defer to NOAA on that. Any further regulations themselves, if needed, would be promulgated by the Coast Guard and have industry input.

Mr. FORSYTHE. You have, of course, been in this field for some time, but you would not conceive that you would go into final promulgation of the regulations without not only other experts in the field, but the industry itself. They have to be a part of this.

Captain SCHUBERT. No question.

Mr. FORSYTHE. Of course, OSHA should be consulted in this area, as they were in the promulgation of the Coast Guard's diving standards. I would assume you would follow the same procedure in this situation?

Captain SCHUBERT. They have prepared and have published a regulatory package on commercial diving. The Coast Guard also has promulgated regulations applicable to commercial diving on inspected vessels and the OCS. We are working very closely with OSHA and are looking at the possible development of additional regulations for medical standards and qualifications.

Also, we find, as the studies being conducted by NOAA progress, there will be areas that may require continuing modifications of the existing regulations by the Coast Guard and OSHA.

Mr. FORSYTHE. You do not perceive that you may be reaching the point of overregulation in this field?

Captain SCHUBERT. No, sir; I don't think so. We would hope that the Coast Guard regulations are, in fact, reasonable and demonstrate our interest in the safety of the individuals who are engaged in this hazardous occupation, as well as not inhibiting the development of the OCS.

Mr. FORSYTHE. You mentioned that OSHA does have lead agency jurisdiction for all commercial diving. But who enforces those standards, in accordance with Public Law 95-372, do you feel that should be in the OCS?

Commander CRONK. OSHA and the Coast Guard have the responsibility to enforce their regulations which are basically similar regulations which apply to the commercial diving industry as a whole. But the areas of application are different. This is in accordance with our interagency agreements that we are working on, memorandas of understanding, and also in line with our respective authorities.

Mr. FORSYTHE. So as far as enforcing them on OCS, commercial diving—is that your responsibility?

Captain SCHUBERT. Yes.

Mr. FORSYTHE. You do, then, carry enforcement of all deepwater diving?

Captain SCHUBERT. On the OCS.

Mr. FORSYTHE. How about deepwater diving not on OCS?

Commander CRONK. We enforce the Coast Guard commercial diving regulations on OCS facilities, on OCS operations where we have authority, and on Coast Guard inspected vessels, where we also have authority.

Mr. FORSYTHE. I know there is no clear answer to this, but is there any other commercial diving that you don't cover?

Captain SCHUBERT. We will have to provide a clearer picture of this. I don't think we have it at our fingertips.

Mr. FORSYTHE. One of the traps we get into up here on the Hill, we duplicate, we complicate for the bureaucracy and the industry is at the tail end of it, and we make a mess for them. So these kinds of things, I think, are important.

So I would appreciate an answer on the record.

[The information follows:]

COAST GUARD REGULATIONS OF COMMERCIAL DIVING OPERATIONS

Coast Guard regulations, do not cover commercial diving operations taking place from an uninspected vessel on the waters above the OCS such as salvage diving for a sunken Spanish galleon. It is our opinion that OSHA's regulations do not apply either. Coast Guard regulations only apply to commercial diving operations taking place from Coast Guard inspected vessels anywhere in the world; commercial diving operations taking place from any artificial island, installation or other device on the OCS or from any vessel engaged in activities related to the OCS; and commercial diving operations taking place at any deepwater port or its safety zone, or from any vessel connected with a deepwater port or within the deepwater port safety zone.

Mr. BREAU. We will have some questions we would like to submit to you, but I have one question on the manning requirements.

The legislation provides that the Coast Guard must promulgate regulations that vessels or other vehicles or structures operating on the OCS be manned by U.S. citizens or permanent resident aliens.

We have information from some newspaper articles in Louisiana that indicate to the committee there are foreign-owned construction vessels with foreign crews that are designated to work in the Gulf of Mexico and are actually working, taking the position that crew members are all part of the marine crew and therefore not working on the fixed structure and thereby avoiding the manning requirements of section 30.

I guess my general question is, are you familiar with this situation and could you give us any indication of what is actually happening with regard to the manning requirements that they are using in this kind of situation?

Captain SCHUBERT. I would defer to Commander Cronk.

Commander CRONK. The manning of foreign vessels is addressed in section 30, by section (c)(2).

Mr. BREAU. Are the regulations complete to implement section 30?

Commander CRONK. The regulations are near completion.

Mr. BREAU. Would they address the type of situation I laid out in front of you, whereby they say the workers are part of the marine crew and not under the requirement?

Commander CRONK. Yes, sir, they would.

Mr. BREAU. If it is a duck we want to call it a duck; that is, if it looks like a duck and it walks like a duck.

Commander CRONK. We have no problem with the interpretation and the intent the Congress had in the necessary rulemaking.

Mr. BREAU. What kind of time frame are you working in?

Captain SCHUBERT. We are a little behind schedule on those. We are looking probably to the end of April as a ballpark guess on it.

I would like to note here—and it is not intended as an excuse—but we have had an extreme regulatory load, particularly in conjunction with this legislation. Title 3 poses some new challenges to the Coast Guard and we had extensive regulatory processes on-going with that section of the law. It gets to the point of how many regulations can we process within the given resources that we have.

Mr. BREAU. If we are going to give you additional requirements, it is important that you get additional manpower and resources to do the job. That is something we have to follow up on, to make sure that we follow through with all of the legislation we write here, and wrote in the last Congress. That is why the chairman is absolutely correct to try to continue this committee rather than have you go before 10 or 12 other committees.

I would rather have you out in the field doing the work than testifying before Congress.

The committee appreciates your appearance and we ask that you respond to some additional questions that we will have in writing.

Captain SCHUBERT. Yes.

Mr. BREAU. With that, the Committee on the Outer Continental Shelf will be in recess until March 20.

[Whereupon, at 4 p.m., the Committee on the Outer Continental Shelf recessed, to reconvene on Tuesday, March 20, 1979.]

OCS OVERSIGHT OF 1978 AMENDMENTS

TUESDAY, MARCH 20, 1979

HOUSE OF REPRESENTATIVES,
SELECT COMMITTEE ON THE OUTER CONTINENTAL SHELF,
Washington, D.C.

The committee met, pursuant to notice, at 9:37 a.m., in room 1334 Longworth House Office Building, Hon. John M. Murphy, chairman, presiding.

Present: Representatives Murphy, Hughes, and Forsythe.

Staff present: Carl L. Perian, staff director; Lawrence J. O'Brien, chief counsel; Thomas R. Kitsos, counsel; C. Grady Drago, minority counsel; Thomas Tackaberry, Kate Bonner, Bob Shea, Charles Holm, and Bill McGuire, staff.

The CHAIRMAN. The committee will come to order.

Today is the third day of a series of oversight hearings on the implementation of the Outer Continental Shelf Lands Act Amendments of 1978. Since March 8, we have heard from some 20 witnesses representing the administration, private industry, trade associations, labor unions, and public interest groups.

As we discovered with the flurry of activity before and after our December proceedings, the exercise of congressional oversight can bring action where there has been inaction, and sudden concern where there has been lassitude or disinterest. It has been the intent of these proceedings to compel action, on the one hand, and communicate concern on the other.

Hopefully, the committee's message has been heard—a message which has been clear since September 18 when Public Law 95-372 was signed: We cannot lose a single day in putting the OCS law into operation.

Regrettably, the first 2 days of oversight hearings produced disturbing evidence of an almost purposive disregard of congressional intent, and the possibility of unacceptable delay.

It appears that there is a fundamental difference between the Departments of the Interior and Energy with respect to the rate of offshore oil development. At stake is nothing less than our national leasing policy for the first half of the 1980's.

The Interior Secretary proposes a schedule of 26 offshore lease sales over 5 years to 1985. The Energy Department, on the other hand, urges an accelerated schedule of 28 lease sales in 4 years to 1984. One administration official has been quoted in the press as saying that the issue: “* * * could culminate in a Cabinet-level debate * * *.”

Since Congress has made its intent crystal clear, there should be no need for any debate within the executive branch. Vigorous oversight by this committee will insure that the intent is honored.

In provocative statements, witnesses have documented example after example of instances in which proposed executive agency regulations appear to contradict congressional intent. Indeed, competent testimony indicates that there may be some instances in which there have been deliberate attempts to circumvent the Outer Continental Shelf Lands Act Amendments of 1978. A summary of the concerns of non-Government witnesses was testified to as follows:

"The proposed regulations tend to defeat the primary purpose of the amendments;" and, "the proposed regulations frequently go beyond the scope and intent of the law and, occasionally, are in direct conflict with it."

Representatives of the Association of Diving Contractors alleged that the diving industries were intentionally excluded from six meetings held in the National Oceanic and Atmospheric Administration to develop regulations which will set standards for commercial diving operations on the Outer Continental Shelf. The diving spokesman also suggested that the National Institute of Occupational Safety and Health Administration has been unilaterally committing funds for diving research without waiting for the NOAA plan.

Coast Guard witnesses revealed that an inspection had been held as recently as late January on the Penrod Oil Co. rig where eight workers were killed in a tragic fire last week. The Coast Guard also indicated that some 50 additional personnel and extra funding are necessary to carry out safety duties on the Outer Continental Shelf. One can only hope that the prompt commencement of no-notice inspections by the Coast Guard, as required by the act, can diminish the number of such tragedies.

Yesterday, the Comptroller General published a GAO study of lease sale 43 on the Georgia embayment, which I requested on September 11, 1978.

The GAO report underscores the absolute need for vigorous OCS oversight when it concludes:

First, that better information on resource potential is needed, and second, that subsequent national OCS policy decisions must await further experience with alternative leasing systems and detailed analysis of long-term OCS planning, based on the 1978 OCS Amendments.

As the GAO study makes clear, the passage of the 1978 act was just the first step in a lengthy, painstaking process, and the executive agencies must realize by now that the Congress is intent upon acting as a full partner at every step along the way.

With 22 percent of this Nation's marketable gas and 9 percent of our crude oil now originating on the Outer Continental Shelf, we must move ahead quickly without delay or distraction.

When my colleagues in the House ultimately consent, this committee will persist in its effort to carry out the intent of House Resolution 97, which established the committee in the 95th Congress. That resolution authorized continuation of the OCS Committee, "* * * through the legislative process," a period which the House Administration Committee said "* * * should clearly include the oversight and monitoring of the promulgation of rules and regulations to implement the 1978 amendments." Only when

those regulations are in place and in compliance with the will of the Congress will that process be complete.

I would like to yield at this time to the distinguished minority member, Mr. Ed Forsythe, of New Jersey.

Mr. FORSYTHE. Thank you, Mr. Chairman. I congratulate you on your statement. I have one that I would like to read at this point.

Mr. Chairman, I first would like to thank all of the witnesses who have appeared before this committee over the past 4 months. I believe that they have come before this committee well prepared, and have expressed their concerns succinctly.

Unfortunately, I find myself in a very unusual position, particularly for a minority member of this body, by saying that, "I told you so."

As you will recall, I voted against final passage of the conference report on S. 9, because I felt that it would create the very problems our committee has uncovered.

For the past 4 months, we have heard that the Federal departments and agencies are dragging their feet in implementing Public Law 95-372; that there are bureaucratic turf battles being conducted; and that actions are being taken contrary to congressional intent, and sometimes contrary to the new statute.

If there was ever evidence uncovered to support the need for intensive oversight by congressional committees, we have done so.

There have been numerous complaints from various witnesses that they are having difficulty finding a single source to deal with concerning OCS leasing, since the provisions of the act are spread over 11 departments and agencies of the Government. I would suggest that if it were not for this committee, they would have the same problems in the House, since 10 standing committees have jurisdiction of various provisions of the bill.

I have also experienced something during these hearings that I have not experienced in all of the years I have been in Congress, and that pertains to the statements of the witnesses of the Department of Interior.

On March 8, Mr. Emery informed the Department of Interior witnesses that we knew they had completed their 5-year leasing schedule, and that it contained a maximum of five or six lease sales a year. They denied that it was completed, and the Director of the OCS Program for the Department of Interior stated that they did not know what they were going to recommend.

The very next morning, the staff received from the Department of Interior, the release of their 5-year schedule. Not only was Mr. Emery correct in that they had indeed finished their schedule, but that it did contain a maximum of five or six sales a year.

I have written Secretary Andrus on this matter, but to date, this committee has not received any comment from his office on the actions of their witnesses.

I would like all of the Federal departments and agencies to remember one thing.

This committee was formed and charged with developing and implementing an accelerated OCS leasing program. One that not only created an orderly program by which OCS energy resources could be produced, but we were also responsible for developing provisions that would increase competition, protect the human,

marine, and coastal environments, and provide for a fair financial return for the leasing of our Nation's energy resources. In spite of the faults of Public Law 95-372, I believe with some changes and with proper implementation, we can accomplish this goal.

However, my biggest concern is for the consumers of this Nation, of which I am one.

When this committee was formed, our Nation had already experienced energy problems. Today, we are faced with an energy problem greater than was anticipated just a few short years ago. The problem is not one of our planet not having enough oil reserves and resources, but of the dependence of this Nation on the future good will and stability of foreign nations for such a large percentage of our oil.

If there was some way we could suddenly develop all of the oil and gas that existed on the OCS, it would not be enough, in itself, to totally solve our problem, even though we have no idea what there is on the OCS in the way of hydrocarbon resources.

But, if you accelerate leasing on the shelf, as three Presidents have called for, and combine this with conservation, provide the incentives to develop all fossil fuels, proceed with Federal actions and policies that will allow the development of coal and shale oil, and develop alternative energy technologies, we will go a long way toward helping ourselves.

Mr. Chairman, I know you agree with me that one of the positive steps this Congress, particularly the House, can take to at least insure that the energy resources on the OCS will be developed at an accelerated and orderly pace, is for this committee to continue its responsibility of implementing the regulations and programs required by Public Law 95-372.

I thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Mr. Forsythe.

Our first witness today will be Hope Robertson of the Environmental Policy Center. Ms. Robertson of the Environmental Policy Center has been a consistent and energetic participant in the development of OCS policy.

STATEMENT OF MS. HOPE ROBERTSON, ENVIRONMENTAL POLICY CENTER

Ms. ROBERTSON. Thank you, Mr. Chairman.

I first want to extend my apologies for Frances Beinecke, who was not able to be here today. She thought she was supposed to be here tomorrow, so I got a call last night asking if I would speak before you today.

What I would like to do is submit, in more detail, a statement at a later date—since I did not have time between 10 o'clock last night and this morning to prepare a detailed statement—and I believe Ms. Beinecke would also like to submit a detailed statement for the record.

First of all, I want to thank you for giving me the opportunity to appear before you once again on the subject of the implementation of the Outer Continental Shelf Lands Act of 1978. As I said, my statement today will be very brief, but I would like to make four major points.

First of all, I definitely appreciate this committee's interest in OCS implementation. However, I think it is difficult to go into a great deal of detail as to how the implementation is going in light of the short time period since last December's hearings.

With a few exceptions, and I must admit, they are important exceptions, the implementation process seems to be sticking to the estimated schedule that the Department of Interior issued, fairly well.

EPC has commented, and plans to comment on the proposed regulations which have been issued by the Department of the Interior. Other members of the environmental community are also availing themselves of the opportunity to submit criticisms, et cetera, for changes in the proposed regulations.

However, until we see the final form of the regulations, it is difficult to assess what the Department of Interior is going to accept in the way of our suggestions, and what they are going to reject. Unfortunately, this is one of those awkward periods where we have to sit and wait to hear what the Department of the Interior is going to do with our various suggestions.

However, I would like to take this opportunity to comment on two problems that I have seen in the last few months.

First, the recent announcement for the leasing program, which came out of the Department of Interior is, in my estimation, inadequate, and does not meet the requirements of section 18 of the act. What was published is really a leasing schedule, and not a leasing program.

We will be submitting detailed comments to the Department of the Interior on this, and I would be happy to forward them to this committee. I will go into detail on that program in those comments.

[The information was not received for the record:]

STATEMENT OF THE NATURAL RESOURCES DEFENSE COUNCIL, INC., ON THE
DEPARTMENT OF INTERIOR'S PROPOSED 5-YEAR LEASING PROGRAM

(By Francis Beinecke and Sarah Chasis)

The Natural Resources Defense Council, Inc. (NRDC), a public interest environmental organization, with over 40,000 members nationwide, submits the following comments on the proposed five year leasing program, released on March 9, 1979. NRDC's comments reflect an analysis of the program in relation to the requirements of Section 18 of the Outer Continental Shelf Lands Act Amendments of 1978, and to NRDC's preliminary comments submitted to the Department on December 15, 1978.

NRDC is concerned that the program presented to the Governors and the public is essentially only a schedule. The document prepared by the Department summarizes concerns expressed by states and interested parties in response to the Secretary's request for comments in December 1978. Although the document contains information on the hydrocarbon potential and general environmental characteristics of each of the twenty-two possible sale areas, it does not contain a rationale for the schedule chosen by the Secretary or an analysis of how the requirements of Section 18 are met by the program. These concerns are discussed in greater detail below.

Before discussing NRDC's concerns about the draft program, we would like to indicate our strong support to the Secretary's decision to modify the options presented to him and delete Bristol Bay from the leasing schedule, and move St. George Basin and Chukchi to contingency sales. The Governor of Alaska's comments on the program and those of numerous environmental organizations have indicated that Bristol Bay is one of the most productive offshore areas in the world. Governor Hammond recommended that leasing there be postponed indefinitely. The concerned organizations requested that it be deleted from the leasing program. The Secretary's decision to omit this sale even though it was included in the staff

options represents a commitment to meeting the intent of Section 18 to balance oil and gas development with environmental concerns. His foresight to omit the highest areas of environmental concern will help to avoid future conflict similar to that over lease sale 42 on the Georges Bank.

NRDC's review of the proposed leasing program reveals the following inadequacies.

1. There is no discussion of the considerations that caused the Secretary to modify the leasing schedule option proposed to him by staff, or a rationale for the option which was selected.

2. The generality of description and large geographic scope of areas included in the proposed program run counter to the specificity intended by Section 18 of the amendments.

3. The program describes no procedure for the consideration of marine productivity, environmental sensitivity, competing uses, or environmental and predictive information as required in Section 18(a)(2) of the amendments.

4. The program does not include a discussion of the Bureau of Land Management's Environmental Studies Program as a component of the five year leasing program.

5. There is no indication of how the requirements of the National Environmental Policy Act are to be met.

1. Proposed schedule

The Secretary of the Interior sent to the Governors of affected states a proposed leasing schedule on March 9, 1979. This schedule varied in many respects from any of the options presented to him by his staff as described in the program document. The most noteworthy changes were the deletion of Bristol Bay from the schedule, the placement of the Chukchi Sea and St. George Basin in a second, planning category, and the moving down in the schedule the two North Atlantic sales. We strongly support these changes because they represent a concern for availability of information and/or the vulnerability and productivity of those environments. The proposed schedule must be presented with an accompanying discussion of the rationale behind the choice, including the manner in which the considerations of Section 18(a)(2) were treated. As presented, the five-year leasing program is nothing more than a schedule, and an exceedingly general one, at that. We believe that a discussion presenting the reasoning of the selection in the context of the requirements of Section 18 is necessary for Congress, the states and other interested parties to evaluate whether the program obtains "a proper balance between the potential for environmental damage, the potential for the discovery of oil and gas, and the potential for adverse impact on the coastal zone." (Section 18(a)(3)). It is not adequate for officials in the Interior Department to claim that the existence of the schedule verifies the fact that Section 18(a) was met.

2. Geographic scope of proposed areas

The program describes sale areas in the vaguest descriptive terms possible. Vast areas, such as Central and Northern California, the North Atlantic, and the Gulf of Mexico are listed in the public notice. We believe that the identification of such broad areas does not represent the intent of Congress for a five-year leasing program. As the program document indicates that each sale is intended to cover approximately one million acres, we believe it would be possible to split up some of the areas into smaller pieces to better educate the public as to the probable location of the sale areas. The public is greatly interested in and concerned about the scope and potential impacts resulting from these sales. Right now many people in California are very concerned about the huge area included in Sale 53. Whether or not portions of the Georges Bank will be covered in one or both of the North Atlantic sales is of very great interest to many people in New England. We believe that the Department's tendency towards generality in this program could result in very strong opposition from the public, because of what is believed to be an intentioned avoidance of addressing conflicts early in the process.

In the draft program that will be presented to Congress in June, we recommend that the schedule be accompanied by a description of the probable scope of each area, particularly the areas to be included in the call for nominations for each sale. This should include an indication of the general boundaries, particularly the likelihood of leasing close to shore. This requirement is indicated in Section 18(a) by requiring that: "The leasing program shall consist of a schedule of proposed lease sales indicating, *as precisely as possible, the size, timing, and location of leasing activity* * * *" (italic supplied).

The advantage of requiring greater specificity is to provide a context for the considerations required by Section 18. To fully balance environmental impacts and oil and gas potential, the Department would have to analyze the area likely to be

impacted. For example prime fishing areas, sea lanes, marine mammal habitat, might or might not be an issue, depending on the probable area to be covered. The broad areas covered in the proposal, which in fact covers a large portion of the offshore waters of the country, would require an analysis of every fishing area, every sea lane, every marine sanctuary proposal within the vast areas covered in the proposal. To avoid such an enormous analysis, which is probably unnecessary if the areas are known more specifically, would be a waste of the Department's staff time and resources. However, it cannot be avoided if the program remains as presented.

3. Considerations of Section 18(a)(2)

Of grave concern to NRDC is the failure of the Department to discuss how the required considerations of Section 18(a)(2) have been addressed in the development of the five-year leasing program. We believe that by listing in detail the issues to be considered, Congress intended a thorough analysis of each. NRDC's particular interest, because of its environmental perspective, is the manner in which competing uses, particularly fisheries, and resource concerns, including marine productivity and environmental sensitivity, were evaluated. We suggested in our comments of December, 1978, that Interior develop a procedure subject to public review, that would institutionalize these considerations.

Although the program document generally describes each area included in the schedule, much of the information included is little more than a rehashing of the information provided originally by the states and interested parties. In addition, the descriptions of competing uses are general and brief. For example, in the description of the North Atlantic information on the abundance of fish and birds and the promising nature of the geological structure is included for the southeast edge of Georges Bank. That information is of little use unless there is an indication of how it is to be weighed.

In NRDC's view, the intent of addressing the considerations outlined in Section 18(a)(2) is to identify as early as possible what conflicts are likely to occur. Once specifically identified, needed studies and mitigating measures can be designed so as to avoid conflicts at the time of the actual sale. Furthermore, by providing a discussion of the way these issues were considered in the development of the program, the Congress and other interested parties can be made privy to how the actual balancing occurred. Section 18 contains no language indicating that these considerations should not be made public and we think doing so would be very advantageous to the successful adoption of the five-year leasing program.

4. Environmental studies program

The program document contains no discussion of manner in which the Bureau of Land Management's Environmental Studies Program will be integrated into the timing and selection of proposed sales in the leasing program. Yet, Section 18 makes clear that the availability of and need for collection of data are to be described in the program. Section 18(a)(2)(H) requires that the program be based on the consideration of "relevant environmental and predictive information for different areas of the Outer Continental Shelf." Furthermore, Section 18(b) requires that the program include estimates of funding and staffing "required to (1) obtain resource information and any other information needed to prepare the leasing program * * * (3) conduct environmental studies * * *." These requirements have not been addressed in the program sent to the governors.

At the recent OCS Advisory Board meeting held in Birmingham, Alabama, on April 17-18, many Board members expressed concern that the leasing program contained no evidence that the redesigned environmental studies program, which the Board supports, has been firmly integrated into the decision points of the OCS program. This is a major concern as the new focus of the studies program is to design studies to be used by decisionmakers in each phase of sale preparation.

The first decision made in preparing a five-year leasing program is the selection of areas to be included. This decision must be based on the availability of information on the different sale areas as well as an identification of studies which are needed before a sale can be held. To accomplish this, for each area in the program there must be an analysis of available information, additional study needs, length of time required for these studies and funding requirements. We recommend that the leasing program include this information in the next draft.

5. National Environmental Policy Act

Congress, in requiring that the Secretary prepare a five-year leasing program based on the considerations and needs described in Section 18 of the amendments, made a major commitment to the long-term development of offshore oil and gas resources consistent with the protection of the marine, coastal and human environ-

ment. The Secretary, as indicated in the draft program, has interpreted this directive as a mandate to proceed into frontier areas, particularly those off the coast of Alaska. In NRDC's view, there is no question but that this commitment by the Secretary represents a major federal action significantly affecting the quality of the human environment. (Section 102(c) of the National Environmental Policy Act.) The Interior Department's 1974 OCS proposal required a programmatic environmental impact statement as did its recent coal leasing program, subject to the Court's order in *NRDC v. Hughes*. The Department would seriously violate its legal obligations as required by NEPA if a programmatic EIS is not prepared on this program.

NRDC believes that a programmatic environmental impact statement would be extremely beneficial in the development of Interior's policy on OCS leasing. The Secretary has a responsibility mandated by Congress to balance energy and resource protection needs, as well as mitigate conflicts as they develop in the accelerated offshore leasing program. A programmatic EIS is the correct context to describe the rationale behind the program, the manner in which the considerations of Section 18 were addressed, the probable conflicts, the mitigation techniques to be used, and the alternatives to the probable impacts of the proposed action. A programmatic EIS should explain why one option is preferred over another, including an assessment of the benefits and costs of each alternative. The recent history of the leasing program indicates that the general public, particularly those concerned with frontier areas, has serious questions as to whether Interior's responsibility to resource protection is, in fact, being met. The Interior Department is not separate from the public, it is in the public's service, and that responsibility requires that major actions, such as leasing offshore for five years in every offshore area of the continental United States, be described in detail to the public for their review and that of other federal agencies.

In his recent Energy Message, the President cited offshore oil and gas development as a major component of the nation's energy program. His request for Interior to develop a program accelerated even beyond what the Secretary proposed, requires a thorough analysis of the impacts of such an acceleration, an analysis of its feasibility, and an assessment of the costs and benefits resulting from it. A programmatic EIS should describe the magnitude of the leasing program, the impacts to the environment of developing a larger five-year program, and the alternatives within OCS leasing, as well as other sources of energy available.

NRDC appreciates the opportunity to comment on this program.

Ms. ROBERTSON. My third point involves the regulations for use of new bidding systems. In EPC's estimation these are some of the most important regulations in the new OCS Act, and unfortunately, they seem to be running into the most difficulty of any provision of the act.

Just as I complained to you at the last hearing that you held in December, the bidding systems are still not out. I had hoped, when I testified in December, that they would be out in February, and here we are toward the end of March and there still is no hope for a quick publication of these regulations. These regulations include both the general regulations covering the traditional bidding systems, and so on, and also the regulations covering a new system, profit sharing, and the accounting system for it.

With each day of delay of the publication of these regulations the use of the new bidding systems is postponed. I am very concerned that more and more sales will be held without being able to have the benefit of using some of these new systems.

The current logjam seems to be located within the Department of the Interior with respect to the general regulations, and in the Department of Energy with respect to the accounting systems for the profit sharing.

I hope this committee can do something to encourage both the Department of the Interior and the Department of Energy to quickly get these regulations out.

I understand that the accounting systems, and the economics for the new bidding systems have to be set up very carefully and very

thoroughly, so we do not have any repercussions from doing a sloppy job.

However, it seems that the delays are not due solely to the Department of Energy and the Department of the Interior being very thorough in their efforts, but rather to some rather petty jurisdictional problems in Energy and Interior, as to who has the final say over these regulations.

I hope that this committee will urge these two Departments to overcome these petty issues, and get on to the more substantive issues of issuing these regulations.

My final point deals with reorganization within the Federal Government. This is a critical period, as you have pointed out, in the implementation of this act, and many proposed regulations and programs are currently being developed. I am quite concerned that if reorganization were to occur in the next few weeks, that many of the programs will be delayed, or slip through the cracks. Should reorganization occur, I hope that this committee will continue to look at what happens to the implementation of this act.

I do not know what the fate of this committee will ultimately be, but either the OCS Committee or separate individual committees, such as Merchant Marine and Interior, should carefully monitor implementation, because I am quite concerned about what happens under reorganization. Finally, I would like to make one point in response to something Mr. Forsythe said.

I find it very interesting that he is commenting on the delays that have been experienced due to the implementation of this act. I believe that all the sales that were scheduled are still going on. If I remember, since we followed the passage of this act for quite a while, you were opposed to many of the new provisions in the OCS Act, and the most controversial ones are the ones that are suffering delays. Since those are the ones that you were most adamantly opposed to, I am surprised that you are upset about them.

But there has not been any delays in the lease sales of the Outer Continental Shelf Lands Act. What has occurred is some slow-downs on promulgation of some of the environmental programs, and some of the bidding systems, as I have mentioned.

Thank you very much.

Any questions?

The CHAIRMAN. Thank you, Ms. Robertson.

Are you aware that in 20 years, the past 20 years, there has been no oversight done on OCS by any of the House committees?

Ms. ROBERTSON. Yes, I am.

The CHAIRMAN. There are 11 committees. The Congress in none of them chose to perform any oversight on the OCS activities for Lands Act Amendments of 1953?

Ms. ROBERTSON. However, I might also add that I think there is far more interest in OCS development at this point, and what happens to it, because of the current energy situation in the United States. So I would suspect that committees will be far more interested in following the process of implementation because of the urgent need to get more petroleum into this country.

The CHAIRMAN. You mentioned the Interior and Merchant Marine Committee performing oversight on its own initiatives. There are 11 committees involved, Education and Labor carrying,

of course, the safety burden, and the integration of safety and labor rules on the Continental Shelf.

I would think that, with the jurisdictional jealousies, or prerogatives that exist in the legislative or executive branches, a fragmented type of oversight would be no oversight, or ineffective oversight.

Therefore, the report of the Committee on House Administration, of March 15, 1978, very clearly stated that the committee should stay in existence through the legislative process, and I will quote, it says: "This process very clearly should include the oversight and monitoring of the promulgation of rules and regulations to implement 1978 amendments."

I wish you would express yourself on that subject, because very shortly we may have the Rules Committee in the House itself considering whether to continue this committee through that oversight period.

Ms. ROBERTSON. Well, obviously I think both myself and many other members in the environmental community are quite concerned that Congress keep up a vigorous monitoring of the implementation of the act. As long as some type of monitoring occurs, and a thorough monitoring, I guess I would prefer not to hazard an opinion as to whether this committee should stay in existence, or whether it should fall under the various committees.

However, I think your point is well taken that a fractured jurisdiction does create problems, and perhaps it is better for it to be organized under one committee, but I prefer to let Congress decide that.

The CHAIRMAN. Did you participate in any oversight, or hearings on the Continental Shelf, for your organization, or any environmental organization, from 1953 until the 95th Congress, when the committee successfully completed its amendments?

Ms. ROBERTSON. The Environmental Policy Center has been active on OCS issues for quite a while. To my knowledge, and because of the fact that I have only been in the center for 2 years, I do not know, but I can find out whether we testified in front of any other committees on the subject of OCS development prior to the creation of the OCS Ad Hoc Committee.

I will submit that for the record, if I may.

[The information was not received for the record:]

The CHAIRMAN. I would not want you or the environmental community to have to make a decision, or to express an opinion in an environmental area, but very clearly, I am asking you if you think the environment, and the intent of the bill that was passed in the last Congress would be better overseen, or better oversight would be afforded if the Continental Shelf Committee that wrote those acts, and its staff, continued in existence through the period of oversight?

Ms. ROBERTSON. Well, if you look at the various provisions of the act, it is quite clear that it breaks down into different subject areas.

The CHAIRMAN. I am familiar with all the provisions of the act; I am sure you know I am.

Ms. ROBERTSON. Yes. But, for instance, I am concerned about the environmental provisions among others, many of which would fall under the Merchant Marine Committee, from my understanding. I

would feel comfortable if the Merchant Marine Committee were responsible for oversight on the environmental provisions.

So I would not try to make a choice.

The CHAIRMAN. What about the men who are operating 450 feet below the ocean? You do not care about their environment?

Ms. ROBERTSON. I am not saying that I do not care about them, but it is not an issue that we have addressed, or been active in in the past.

The CHAIRMAN. Mr. Forsythe?

Mr. FORSYTHE. Thank you, Mr Chairman.

Ms. Robertson, thank you for reminding me of my position on the 1978 amendments to the 1953 OCSLA, which I outlined in my statement. However, these amendments are not the law of the land, and what is happening to those amendments is far more serious than I ever anticipated. That is why it is important that this committee address some of the things that you are talking about in an attempt to make this new act work.

The projection of this current oil shortage is really ancient history, for all of us, except perhaps you since, as you just mentioned, you have only been active in this area for a couple of years. Nobody should really have been in the dark since the 1952 Paley report pointed to the fact that the United States was going to be in an energy crunch within 6 months of the the date of the 1973 embargo.

We were on notice but, as the chairman pointed out, nothing really happened until the activity of this committee centered in on those problems. Therefore I fully agree with the chairman, and we are anxiously seeking support from outside the Congress to continue this committee on the basis that this committee has a proven record it is the only vehicle that will supply the emphasis needed if we are going to see the development that you have agreed is necessary if the 1978 OCSLA Amendments are going to be implemented without delay in accordance with congressional intent.

I do not deny that I was concerned about the provisions of 1976 act. Frankly, I figured that most of them were already written into regulation, and as a result we have created, just what we are talking about here, bureaucratic delay, bureaucratic debate among the various agencies, all of which is stymying the development of several regulations required by the act.

As I see it, they are very important So I would ask you, since the Interior Department was going to be the clearinghouse insofar as information was concerned, whether you think that has been developed in the way it should have, or do you have to run all over downtown to find out what is going on?

Ms. ROBERTSON. Well, as I commented in December, I have been very concerned about the lack of organization of information, both on environmental issues and on the resource potential within the Department of the Interior. I think there definitely needs to be some clear attention by the Department of the Interior in organizing their entire information program on the Outer Continental Shelf, and this deals not only with the oil and gas resources, but fisheries and other resources that may be impacted as a result of OCS development. And I would encourage any efforts by this committee or other Members of Congress to push the Department of

the Interior to centralize information so that we can have access to it in a more organized fashion.

Mr. FORSYTHE. You commented on the regulations on the various bidding systems and pointed principally to the Department of the Interior, but also the Department of Energy.

Do you recall that actually the Department of Energy started moving proposed regulations in that very area to Interior as early as September 28, 1978. I think it is really scandalous that the Department of the Interior has not moved forward as these proposals aim. These regulations are important to our future lease sales. And so my concern is in a large measure the business of the bureaucratic squabbling that you and the chairman have both referred to, and I think it is one of the most serious problems that we have at this time. I hope that that message is made very, very clear as a result of these hearings and, as you say, we can encourage improvement in these areas.

Ms. ROBERTSON. If I may comment on what you just said, the information that was transmitted from the Department of Energy to the Department of the Interior 10 days after the passage of the act were really just a reiteration of regulations on bonus bid systems and systems which were already in place. It required very little work on their part to propose these regulations. Those are the very general bidding regulation systems.

Where the Department of Energy may have been at fault, and I am not sure whether it is just that they are trying to do a thorough job or they are inefficient, but they have been very slow in issuing the regulations for the new bidding systems. That fault does not lie with the Department of the Interior. There does seem to be some problems between the Department of the Interior and the Department of Energy right now over some of the economics and the accounting systems which have been proposed by the Department of Energy. I believe the Department of Energy sent a proposal to the Department of the Interior the first of March, and the Department of Interior is currently going over them. But I have heard from sources within DOE and DOI that there are going to be some squabbles over the outcome of the new bidding system. But I believe much of the delay has been with the Department of Energy as well as Interior.

Mr. FORSYTHE. Well, I guess there is enough delay for everybody to have a full share.

Ms. ROBERTSON. Right.

Mr. FORSYTHE. Our problem is to see what we can do about that. I appreciate your comments and look forward to seeing your full testimony.

Thank you, Mr. Chairman.

The CHAIRMAN. Counsel?

Mr. O'BRIEN. Good morning. Has your organization taken a formal position on the creation of a Department of Natural Resources within the executive branch?

Ms. ROBERTSON. We are in the process of trying to figure out exactly what the final picture of DNR is going to be. We have had numerous meetings with people within the administration on this subject, but we have not yet taken a formal position. To my knowledge, no one really knows what the ultimate details of such a

program are going to be. There are a number of things we feel quite strongly about that would result in us being opposed to any creation of a DNR.

Mr. O'BRIEN. What are some examples of those?

Ms. ROBERTSON. Well, one of our biggest concerns is that if NOAA is transferred to DNR, that oceans and coastal programs be given equal status with other Assistant Secretarial level categories, such as land and water and energy and minerals, or Indian Affairs. We want oceans and coastal areas to have a equal status with those agencies.

Mr. O'BRIEN. As you perceive the proposal now for DNR, as you know it, do you see oceans or coastal areas receiving the attention or status that you think they deserve?

Ms. ROBERTSON. From what I have understood with meetings with Interior last week and with people in the White House, yes. But I am quite concerned about what internal organization of NOAA or the coastal and ocean function is going to be and, in particular, what is going to happen with the OCS program.

Mr. O'BRIEN. How do you perceive the OCS being treated under the present proposal as you understand it?

You suggest in your opening statement or imply that OCS would fall between the cracks—I believe that was your term. Could you amplify that and expand on that a bit?

Ms. ROBERTSON. Well, it has been EPC's position that we prefer to see a program such as the OCS split between two divisions within the Department of Natural Resources rather than falling completely under one Assistant Secretary. Our reasons for that are that in times of a bad administration, we feel the public has much greater access to insure proper implementation and enforcement of a law by having two different Assistant Secretaries essentially pitted against each other.

So, as a result, I am not comfortable with sticking the entire OCS program, which seems to be the proposal that I have heard most recently is really favored, under NOAA. However, much of my opposition would really depend upon how they divide it up within NOAA. I am worried that some of the more protective provisions within the OCS law will be jeopardized if the Administrator who is in charge of encouraging development is also in charge of protecting the marine environment.

Mr. O'BRIEN. Assume for the sake of argument that the Congress elected to terminate this committee and referred oversight responsibility to 11 committees at the same time that the administration created a Department of Natural Resources with all of the attendant disarray that that would create internally.

What would happen to the implementation of the OCS regulations that we are talking about here today? Would that process be delayed, in your view?

Ms. ROBERTSON. It depends how quickly the reorganization occurs. If this occurs within the next week or two, and put into action, for example, then I would be quite concerned. However, looking at how quickly reorganization has occurred thus far, I seriously doubt that a decision will be made for awhile, let alone activated. I do not remember the exact period of time that Congress has to approve it. Is it 60 days that Congress has?

Mr. O'BRIEN. I do not recall it either.

Ms. ROBERTSON. I think it is 60 days in which case you are probably talking about June or July at the earliest that the actual process would start. By that time, many of the proposed regulations will be finalized, so much of the problems could be alleviated.

As I state, it really is going to depend on what happens and when and what form reorganization takes. I am sorry I cannot give you a more definite answer.

Mr. O'BRIEN. Have you had any input into the efforts of the Interior Department to carry out environmental studies under section 20 of the act?

Ms. ROBERTSON. Not yet. NRDC may have had input.

Mr. O'BRIEN. They have?

Ms. ROBERTSON. Yes, I believe they have. However, I can check on that for you. But I have not submitted any formal comments on that.

Mr. O'BRIEN. Have you had any input regarding the section 21 requirement that the Secretary of Interior use the best available and safest technologies for drilling and production operations on the OCS?

Ms. ROBERTSON. We have, as you know, actively supported that provision in the act for years, and although we have not submitted formal statements to Interior as yet on those particular provisions, we have discussed our concerns with various officials within the Department of the Interior in the past.

Mr. O'BRIEN. Have you submitted any comment as yet with respect to control of emissions on the OCS, and if you have, could you briefly outline what the gist of those suggestions were?

Ms. ROBERTSON. I have not submitted a comment on the Clean Air Act provisions because of the fact that—we do not have the expertise to talk about some of the technical issues involved. However, we agree with the comments submitted by the Natural Resources Defense Council, and I would suggest that you contact Frances Beinecke and get a copy of the comments that they submitted.

Mr. O'BRIEN. Thank you, Mr. Chairman.

The CHAIRMAN. The record will be open for 7 days so that Ms. Beinecke's statement can be printed in the record following your presentation this morning.

Mr. Kitsos?

Mr. KITSOS. I wanted to ask one followup question on this reorganization business.

You are familiar, of course, with the Federal consistency provision with respect to State certificates of consistency. Does it concern you at all that if OCS moves into NOAA and NOAA went into a DNR, that the Secretary who sells the leases would also have the override on State consistency provisions? Have you thought that through at all?

Ms. ROBERTSON. Yes. Members of the environmental community have been having meetings within the last few days and discussed that issue among others. That is one of the reasons why EPC is concerned about putting the entire OCS program under NOAA.

I believe, quite frankly, that much of the responsibility for the OCS should fall under NOAA, particularly some of the oceans

programs, et cetera, because if you look through the act there are so many occasions when NOAA has to be consulted currently by the Department of the Interior, that it makes more sense for NOAA to have much of the responsibility. However, as I said, I am quite concerned about a conflict of interest of putting both developments and other activities under the same Administrator.

Mr. KITSOS. Thank you.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Ms. Robertson.

[The following material was supplied for inclusion in the record:]

STATEMENT OF FRANCES BEINECKE, ATLANTIC COAST PROJECT, NATURAL RESOURCES DEFENSE COUNCIL, WASHINGTON, D.C.

The Natural Resources Defense Council, Inc. (NRDC) appreciates the Committee's invitation to comment on the implementation of the OCS Lands Act Amendments. Since our earlier testimony in December of 1978, NRDC has reviewed and commented on notices and proposed regulations issued by the Interior and Commerce Departments pursuant to the new law. We intend to comment on all proposed rules pertaining to the environmental sections of the amendments. NRDC's primary areas of concern are described below. Our complete comments on proposed regulations are attached as an appendix for the Committee's review.

Before addressing the specifics, we would like to emphasize the importance of and need for continuing oversight of the implementation of the amendments during the next year. The implementation of the amendments should result in major changes in the manner in which the offshore oil and gas leasing program is conducted. Continuing oversight is necessary to ensure that the Congressional intent of the amendments is fully met.

Turning to the proposed regulations, we will summarize NRDC's concerns which have been transmitted to the Interior Department on the advance notice on air emissions, the OCS information program, the regulations covering exploration and development and production plans, federal consistency under the Coastal Zone Management Act and the proposed leasing program under Section 18.

Air emissions

The Interior Department's advance notice for a rulemaking covering the air emissions requirement of Section 5(a)(8) in the amendments raised certain questions concerning whether the rule should be restricted to a limited geographic area, to certain types of OCS operations and to certain emissions. This approach towards seeking to limit the scope of the rule prior to gathering basic data on the subject is of concern to NRDC. Section 5(a)(8) does not specifically indicate any limitation of scope. In fact, it encompasses any situation where a relationship can be shown between offshore air emissions and a state's ability to meet ambient air quality standards. We believe information on ambient air quality in adjacent states, offshore meteorologic conditions and emission sources, types and levels would have to be collected before many of the questions addressed in the notice could be resolved. We object to the Interior Department attempting to decide on the questions prior to a comprehensive analysis of the problem.

Oil and gas information program

The proposed rule on the Oil and Gas Information Program does not adequately involve the public in the review of available information. There is no procedure to acquaint the public on the availability of information; or to provide an opportunity to review it. Furthermore, the proposed rule limits even the state and local governments involvement by restricting the availability of proprietary and privileged information to those states where leasing is proposed within 3 miles of a state's jurisdiction. Section 26(d)(2) of the amendments is not so limited, but refers to "adjacent" states.

Exploration, development, and production plans

NRDC's attached comments on the exploration and development and production plans indicate those parts of the proposed regulations which we support as well as those sections which are of concern. Specifically, we support the Department's decision to include the requirement for an Environment Report to accompany both plans. The information required in the Reports we believe will help mitigate environmental impacts associated with offshore operations. Also, by including the Re-

ports the Department has retained consistency between earlier regulations governing exploration and development and production plans and this set.

To summarize our general areas of concern; the proposed regulations are too limiting in the following areas: the information required in development and production plans and the environmental impact statement prepared on such plans; the criteria used in deciding whether an EIS should be prepared. There is no system for public notice or public comment on exploration and development and production plans or on the decision as to whether an EIS should be prepared.

OCS leasing program

On March 9, the Secretary issued a draft 5 year leasing schedule as required under Section 18 of the amendments. As stated at the December hearings, NRDC is concerned that parts (1), (2), and (3) of Section 18(a) which require a consideration of competing uses of the OCS including areas of environmental sensitivity and marine productivity are not fully addressed. The schedule continues to contain key areas where conflicts are known to exist, for example the Georges Bank and the Beaufort Sea, without any explanations as to how the environmental sensitivity or marine productivity of these areas were assessed in the development of the lease schedule.

Because the amendments specifically state that these factors must be considered when developing a leasing program, we maintain that the Secretary must establish a procedure that will be used to meet these requirements and that that procedure must be presented to the public for review. The Secretary has continued to interpret Section 18 as a requirement for a schedule not a program.

We urge this Committee to ascertain from the Department how these consideration requirements in Section 18 are to be met in a systematic process which is subject to public review.

Federal consistency

New regulations issued by the Commerce Department (15 CFR 930.79) to bring the timing of state consistency review into conformity with the amendments are contrary to the language and purposes of the Coastal Zone Management Act, as amended. The CZMA allows states six months to review a project for consistency, yet the new regulation severely limits this period by requiring "the minimum time necessary to inform the public, obtain sufficient comment and develop a reasonable decision." We have recommended deletion of this language to bring the regulation into conformity with the amendments and the CZMA.

NATURAL RESOURCES DEFENSE COUNCIL, INC.,
New York, N.Y., March 5, 1979.

Re Federal consistency regulations, 15 CFR section 930.79 (44 Fed. Reg. 3705, Jan. 18, 1979).

JAMES P. LAWLESS,
Assistant General Counsel, OCZM-NOAA,
Washington, D.C.

DEAR JIM: I am writing concerning the revision to the federal consistency regulations issued after passage of the Outer Continental Shelf Lands Act Amendments of 1978. I believe that the procedures recommended to the states under Section 930.79 (State Agency Concurrence or Objection) are contrary to the language and purposes of the CZMA, as amended.

The provisions in question provides that the states should: "restrict the period of public notice, receipt of comments, hearing proceedings and final decision-making to the minimum time necessary to inform the public, obtain sufficient comment, and develop a reasonable decision on the matter."

NRDC submits that this constitutes an attempt to rush the states through their consistency review and, in the process, limit to a minimum the time available for public review and comment. We believe this to be unwarranted and not in conformity with the statute.

The statute gives states with approved coastal zone management programs up to six months to make their consistency determination, unless after the first three months they fail to notify the USGC Supervisor and the Assistant Administrator of NOAA of the status of their review and the basis for further delay. This regulation, however, attempts to rush the states to decision even before the three to six month period permitted by the statute. It threatens to cut short the opportunity for public review and input. NRDC objects to this.

We recommend the deletion of the language of the regulation quoted above. The regulation absent this language conforms precisely to the statute.

Thank you for your consideration. We would like to be informed as soon as possible regarding your intentions with respect to the regulation.

Yours sincerely,

SARAH CHASIS,
Senior Staff Attorney.

NATURAL RESOURCES DEFENSE COUNCIL, INC.,
New York, N.Y., March 14, 1979.

Re Proposed rule on the Outer Continental Shelf oil and gas information program.

DON E. KASH,
Chief, Conservation Division, U.S. Geological Survey,
National Center, Reston, Va.

DEAR DON: Following are NRDC's comments on the Proposed Rule on the Outer Continental Shelf Oil and Gas Information Program (44 Fed. Reg. 3524, January 17, 1979).

We recommend that Section 252.3(a) be revised to require that copies of the data, information, interpretations, etc. be provided the Director on a regular and timely basis. Unless the Director has the data, etc., he is not required to provide summaries of such information to the States. Thus, to ensure that the States receive such information on a regular and timely basis, the Director must receive it on a regular basis. No such provision exists under the proposed rule.

The summary report, made available under Section 254.4 to affected States and local governments, should also be made available to the public. Public notice regarding the availability of such information should be published in the Federal Register. Interested persons who so request should be notified of the availability of such reports.

This section should also provide that data and information developed by USGS and furnished by lessees will be analyzed, interpreted and compiled as soon as practicable after collection and receipt so as to ensure the timeliness of the report to the States.

Notice and public availability of the index of lists of information, reports, etc. under Section 252.5 should be provided to the public. This index should specifically list environmental studies, etc., carried out by DOI or the lessee.

Section 252.7 providing procedures for making proprietary and privileged data and information available to affected States is too limited. It provides for State review of such data only where leasing is proposed within 3 miles of a State's jurisdiction. Section 26(d)(2) of the Outer Continental Shelf Lands Act is not so limited. It provides that the Secretary shall provide privileged information to a designated State official regarding any activity adjacent to the State once the lease sale has been held in that area. The area "adjacent" to the State is not limited to a 3-mile area. We believe that the regulation as proposed runs counter to the Act's intent.

Thank you for your consideration of these comments.

Yours sincerely,

SARAH CHASIS,
Senior Staff Attorney.

STATEMENT ON ADVANCE NOTICE FOR PROPOSED RULEMAKING ON OCS AIR
EMISSIONS

(By Frances Beinecke, Natural Resources Defense Council)

The Natural Resources Defense Council (NRDC), in response to the Federal Register Notice of December 28, 1978, submits the following comments on the advance notice of a proposed rulemaking to control air emissions on the Outer Continental Shelf. NRDC's interest is to ensure that the proposed regulations are consistent with the Congressional intent of Section 5(a)(8) of the Outer Continental Shelf Lands Act Amendments of 1978, as indicated in the Conference Report (No. 95-1474).

Before turning to the questions raised in the notice, NRDC would like to reiterate earlier concerns expressed to the Ad Hoc Select Committee on the Outer Continental Shelf and to Secretary of Interior Andrus in December of 1978 regarding the Interior Department's failure to promulgate regulations required by the Amendments in a timely manner. Since the amendments were signed in September, few regulations have been promulgated, and the schedule for issuing regulations has been changed twice. Many sections of the amendments, including Section 5(a)(8) will not become operable without the issuance of regulations by the Department. Again,

we urge the Department to issue all necessary regulations in a timely manner. The acceptance of lease sales in frontier areas by NRDC and others is contingent on demonstration by Interior to implement the amendments.

Section 5(a)(8) was included in the amendments after a recognition by the conferees that OCS operations could affect a State's ability to meet national ambient air quality Standards. The amendments require that emissions from offshore operations must be controlled when such a relationship can be demonstrated. It is the Department's responsibility to collect information from all lessees on projected emission levels and existing meteorological conditions in the offshore areas to establish when such a relationship exists, and, when emissions must therefore be controlled.

The first general question raised in the notice concerns the scope of information required to make a determination as to the projected emission levels from offshore operations affecting onshore air quality. Because offshore sales are now proposed for many frontier areas, such as along the coast of Alaska and the Atlantic States, where there has been no opportunity to establish whether air emissions in these areas would or would not affect an adjacent State's ability to meet national ambient air quality standards pursuant to the Clean Air Act, all areas must be assessed. No general findings or exemptions as suggested in Question 1.d can be made until preliminary meteorological data on offshore areas has been collected and until lessees submit information on the projected level of emissions from their offshore operations.

The Interior Department should consult with the Environmental Protection Agency and air modellers to establish what models would be most appropriate for collecting the necessary data base. The lessee should be required to submit information on the chemical composition of the emissions and an estimate of the volume of emissions.

Question 1.b in the notice asks whether the lessees should submit information on projected emissions with or without abatement technologies. In order to fully assess the impact of an operation of air quality, we believe the data should be submitted for the base emissions without the abatement technologies. The information without the abatement technologies provides the necessary information on the dimension of anticipated impact. Once the scale of emissions has been identified, the Interior Department must then determine what abatement technologies would be appropriate to prevent emissions from affecting an adjacent State.

Question 1.e asks whether temporary sources, such as drilling vessels, should be controlled. NRDC thinks they should be. The amendments do not distinguish between short or long term, temporary or permanent, operations in the OCS but refer generally to "activities authorized under this Act." As the language does not specify one type of activity over another, we believe the proper interpretation is to cover any activity which would be subject to Secretarial review at the exploration or development stage, if emissions can be shown to affect a State's air quality. It would run counter to the intent of this section for the Interior Department to limit the applicability of this regulation to some types of OCS activities and not to others. As the conference report specifically refers to the Secretary's making a determination when an exploration plan is submitted, and as drilling rigs are an integral part of exploration, there is no question that they are to be covered by the regulation if an impact on an adjacent State's air quality is shown.

The second general question in the notice relates to national ambient air quality standards. We find the question as to whether the amendments mean national ambient air quality standards or State standards is more stringent to be unnecessary. The conference report makes clear, as is quoted in the notice, that the Secretary must issue regulations which would allow States to meet more stringent standards if these were contained in an approved State Implementations Plan (SIP).

The Clean Air Act in Section 116 clearly establishes that States have the ability to implement their own stricter standards. If a State does adopt its own standards, and these are more stringent than the national standards, then they in fact become equivalent to the national ambient air quality standards if approved as part of a State implementation plan by EPA. It is this interpretation that the conferees intended under Section 5(a)(8), and that intent is clearly established in the text of the conference report (p. 85). We find it specious for the Interior Department to even be raising this as a question in the notice as it is so explicitly answered in the conference report.

We think it mistaken for the Interior Department to limit the "significantly affect" requirement to non-attainment areas as suggested in the discussion of question 4. This option would narrow the intent of the conference report which specifically indicates that attainment or maintenance of ambient air quality standards in an area must be considered. The report gives no indication that an area has to be a nonattainment area for the regulation to become operable. It is not the intent of

Congress to allow offshore operations to degrade a State's air quality but to assure attainment or maintenance of existing air quality standards. We recommend that the Department adopt the third option in Question 4, to regulate all emissions impacting onshore air quality no matter whether the area is in attainment or nonattainment.

In answer to question 4(b), we believe that standards for prevention of significant deteriorations (psd) are considered to be national ambient air quality standards in the Clean Air Act. The Interior Department's choice to use stricter State psd standards would be consistent with the conference report's indication that stricter State standards should apply when present. Because the report does not identify standards for each pollutant, we assume that the reference to national ambient air quality standards intends the broad definition contained in the Clean Air Act.

Question 5 asks whether Interior should adopt EPA's offset policy for nonattainment areas for offshore operation. We believe that Interior's offset policy should be consistent with the EPA policy. EPA's conditions for new sources should be adopted by Interior where the relationship has been established that offshore operations would contribute to an area's inability to attain and maintain national standards. In addition, any offshore offsets required of the lessees must be required in the same air sheds as the onshore nonattainment area.

In answer to question 5(b), EPA's conditions for new sources or modifications of existing sources in nonattainment areas should be applied to OCS operations where the operation can be shown to contribute to an area's nonattainment. We do not believe there is a rationale for Interior to modify EPA's conditions, once a finding can be made that the offshore operation contributed to impaired air quality onshore.

Question 6 addresses the issue of whether existing operations are subject to the requirement of Section 5(a)(8). The language of the section refers to "activities authorized under the act." As stated earlier, this covers any activity which would be subject to the Secretary's review at the submission of exploration or development and production plans. Any action which requires such review after the enactment of the amendments would be subject to this provision.

The final question in the notice addresses the role of State and local governments in the implementation of this section. We believe that their right to participate in this review is detailed in Section 206, OCS oil and gas exploration; Section 19, coordination and consultation with affected States and local governments; and Section 25, oil and gas development and production. At these stages the States and local governments have the opportunity to review the submissions by the lessees and alert the Secretary of their concerns.

As indicated in Section 19, the Secretary has the ability to inter into cooperative agreements with affected States for the "formation of joint surveillance and monitoring arrangements" (Section 19(e)). Consistent with this section, it would be appropriate for the Interior Department to enter into such agreements with States to monitor how offshore air emissions affect the States and whether the regulations are being implemented.

In conclusion, NRDC believes the Interior Department must strictly interpret the requirements of Section 5(a)(8) to control offshore emissions when they can be shown to affect a State's ambient air quality. NRDC is concerned that the tone of the notice indicates that Interior is inclined to interpret this section in the narrowest manner by controlling only certain activities, limiting control to nonattainment areas, and limiting regulations to certain pollutants. We disagree with such a narrow interpretation of this section. If a relationship is established between emissions produced on the OCS and a State's air quality, the Interior Department must require the control of these emissions. The Congress did not limit the applicability of this section to a level of impact.

NATURAL RESOURCES DEFENSE COUNSEL, INC.,
New York, N.Y., March 14, 1979.

Re Proposed rule on oil and gas and sulphur operations in the Outer Continental Shelf.

DON E. KASH,
Chief of the Conservation Division, U.S. Geological Survey,
National Center, Reston, Va.

Dear DON: Enclosed are the comments of the Natural Resources Defense Council, Inc. and Get Oil Out, Inc. on the Proposed Rule on Oil and Gas and Sulphur Operations in the Outer Continental Shelf.

Yours sincerely,

SARAH CHASIS,
Senior Staff Attorney.

STATEMENT OF THE NATURAL RESOURCES DEFENSE COUNCIL, INC. AND GET OIL OUT, INC.

(By Sarah Chasis with the assistance of Frances Beinecke and Edward H. Comer)

The Natural Resources Defense Council (NRDC), a national environmental organization with a membership of over 40,000, submits the following comments on the proposed rule on "Oil and Gas and Sulphur Operations in the Outer Continental Shelf," which appears in 44 Federal Register 3513-3524 (January 17, 1979). Get Oil Out, Inc. (GOO), an environmental organization based in Santa Barbara, California, which has been particularly concerned about the impacts of offshore development, also joins in these comments.

NRDC's and GOO's principal points of concern relate to the following: the limited scope of information required to be detailed in development and production plans and the Environmental Impact Statement (EIS) prepared on such plans; the limited and insufficient criteria for deciding when to prepare an EIS; and the failure to establish a system of public notice and opportunity for comment on both exploration and development and production plans and the decision of whether or not to prepare an EIS. NRDC and GOO request that changes be made in the proposed rule to address these and other points of concern discussed in detail below.

Before turning to the specific comments on each section of the proposed rule we would like to make one additional general comment. We object strenuously to the inadequate public notice of the public hearings held on the proposed rule. Public notice regarding the scheduling of three public hearings in late February and early March was provided in the February 15 Federal Register, less than two weeks before the first hearing was held. NRDC and GOO did not even learn of the public hearings until the day of the third hearing. We object to this procedure and believe that in the future the Department of Interior must provide notice of such hearings at the time the proposed rule is issued and give the public at least 30 days notice prior to the holding of the hearing.

Section 250.34-1 Exploration plan

The definition of "preliminary activities" which may be commenced prior to submission and approval of an exploration plan raises some questions. Physical penetration of the seabed of up to 300 feet (of unconsolidated formations) of 50 feet (of consolidated formations) to the extent it involves actual drilling, appears to be the kind of activity which should be described in and reviewed by the Department as part of the exploration plan itself. The statute does not appear to contemplate the conduct of such activity prior to plan approval. Section 11(c)(1) of the Outer Continental Shelf Lands Act Amendments (OCSLA) provides that: "Except as otherwise provided for in this Act, prior to commencing exploration [defined in §2(k) to include any drilling] pursuant to any oil and gas lease issued or maintained under this Act, the holder thereof shall submit an exploration plan to the Secretary for approval." Therefore we recommend that the exception provided be explicitly limited to core sampling and exclude any drilling activities.

We generally support the language in (a)(1) which articulates the scope of the exploration plan. However, we have two recommendations to make. First, it would be highly desirable to include language that requires the lessee to submit, to the maximum extent possible, a plan which covers the maximum number of tracts leased by that owner or operator. This would be desirable because then the Director (and affected states) could judge at one time the impacts of proposed activities in making the decision regarding approval, modification or disapproval of the proposed

plan. Otherwise, the lessee could submit plans in piecemeal fashion, thus preventing effective federal and state review. The requirement would apply only to the extent the lessee was preparing to go forward with exploration operations on these tracts. The second recommendation is to delete the phrase "to the maximum extent possible" in the second to last sentence of the first paragraph of (a)(1). All wells that the lessee proposes to drill should be described in the plan.

We strongly urge that the exploration plan be required to disclose the specifics of how the lessee proposes to ensure that the activities described in the plan meet applicable requirements of the Clean Air Act, the Clean Water Act, and the Coastal Zone Management Act. The same information which the lessee must submit to EPA and the states for permit or other approvals under these acts should be disclosed in the plan. The Secretary is authorized to require the disclosure of such information pursuant to Section 11(c)(3)(D) of the OCSLA and we believe that such information would be relevant to the Secretary and the states' reviews of the exploration plan.

We strongly support the proposal in (a)(2) to require the submission of an environmental report at the time of submission of the exploration plan, and the proposal to treat the report as part of the plan. This represents a sound interpretation of § 11(c)(3)(D) of the Act.

The regulations should make clear that for those preexisting exploration activities, which are exempt pursuant to § 11(f), the requirements of the preexisting law and regulations, as well as applicable permit or plan conditions, continue to apply. At present, the regulations are silent as to how these activities are to be regulated. Yet, the legislative history of the OCSLA states: "Exploration activities which are excluded by this subsection are to be conducted in accordance with existing law and regulations and the terms of any existing permit or plan." (H.R. Rep. No. 95-1474, 95th Cong., 2d. Sess., 100-101 (1978)). The existing regulations referred to in the Conference Report were those already appearing at 30 CFR Part 150 (the latest were issued on January 27, 1978). Therefore, it should be stated that those prior regulations will remain applicable to exploratory activities which are exempt from the more recent requirements of the OCSLA.

No special treatment of exploration activities on Gulf of Mexico leases is warranted under § 11(c) and, therefore, we recommend that paragraph (a)(2) be completely deleted.

We strongly recommend that (a)(3) be revised to require the submission on a routine basis of a general statement identifying development and production intentions. State and local governments will benefit from the provision of this additional potentially valuable information. At a minimum, the provision should be revised to state that the Director will require that such a statement be provided when it might provide useful information to affected states and local governments.

We strongly urge the adoption of procedures for public notice and comment under (b). While the proposal provides that the public may obtain copies of plans, the absence of any means to notify interested parties of the submission may effectively keep the public from analyzing and commenting on these plans in a timely manner. Despite the extremely short review period, it is imperative that public notice of receipt of the plan be provided, as well as opportunity for comment. Certainly, interested members of the public who request notice regarding the submission of exploration plans should be notified immediately of the availability of the plan and report. We believe the above recommended procedures are necessary to ensure adequate public notice and review of this important phase of the OCS leasing program.

With respect to the criteria set out in (e) for approval, modification or disapproval of a plan, we have two recommendations to make. The first is to make clear that the requirements of NEPA and the requirements of the CZMA (particularly with respect to consistency) must be satisfied before a plan may be finally approved. The second is to clearly state that in order for a plan to be approved, it must meet the criteria in (e)(1)(i) and (ii). This is not stated clearly in the regulations. A situation could arise such as this: the conditions of (e)(1)(i) or (ii) cannot be met through modification but the criteria in (e)(2)(iii) for plan disapproval are not met either. We believe that the regulations should reflect the Act's clear intent that unless a plan meets the criteria of (e)(1)(i) and (ii) it may not be approved. See § 11(c)(1).

In (f), the Director must have the option to require further modification in the event that the modified plan which has been submitted still does not comply with (e)(1)(i) or (ii).

The proposal to conditionally approve an exploration plan which a state has not yet determined is consistent with its approved coastal zone management program makes no sense. Why shouldn't such a plan be automatically disapproved or conditionally disapproved until the required state consistency determination is made? Automatic disapproval is provided in the case of development and production plans

in this same situation and we recommend that the same procedure be employed here.

Under (h), it should be stated that if the state objects to the lessee's consistency certification, if the plan cannot be revised to meet the state's objection, and if the objection is not overridden by the Secretary of Commerce, then the Director may not approve the plan.

Subsection (k) should provide that the Director shall review an approved plan not only at regular intervals but whenever information on offshore or onshore conditions suggest a significant change in the effects of or the impacts on exploratory activities. Such language is needed in order to provide a standard for when the Director will exercise his review authority.

There should be a provision which clearly states that all exploratory activities must be conducted consistent with either an approved exploration plan or approved modified plan. Section 11(e)(2) of the Act imposes this requirement.

We support provisions (m) and (n) of this Section.

We ask that the types of emergency situations referred to in (o) be described and be limited to emergencies such as spills or accidents.

Section 250.34-2 Development and production plan

We are concerned about the scope of the development and production plan as described in (a)(1). To discourage piecemeal submission of development and production plans, we recommend that lessees be required to submit a plan which, to the maximum extent possible, covers the maximum number of leased tracts. The requirement would apply only to the extent the lessee was preparing to go forward with development and production of these tracts. The reasons for recommending such a requirement are similar to those set out above with respect to exploration plans.

We believe section (a)(1) is ambiguous as to the coverage of the plan. The development and production plan should be required to cover all development and production activities the lessee proposes to undertake through sustained production. The third sentence of this subsection is confusing on this point and should be deleted.

The descriptions called for in the development and production plan should be required to be "detailed" to avoid general, uninformative descriptions.

We believe that the information to be included in a plan should include: all activities which take place following the discovery of oil or gas in paying quantities, including drilling, pipeline routing and construction, and construction and operation of all onshore support facilities (see definition of "development" in § 2(l) and H.R. Rep. No. 95-1474, *supra* at 79); all activities which take place after successful completion of means for removal of oil and gas, including the transfer of oil and gas to shore (see definition of "production" in § 2(m)), plus the transfer of oil to a refinery; and a clear and detailed description of how all these activities will be carried out so as to meet the requirements of the Clean Air Act, Clean Water Act and Coastal Zone Management Act (including approved state programs). It should be made crystal clear that all development and production activities whether in the leased area or elsewhere must be disclosed in the plan.

We support the provision requiring an Environmental Report (ER) to be submitted with and to be considered as part of the plan. Our reasoning on this is laid out in the above discussion of exploration plans and environmental reports. We think this provision is crucial.

We strongly object to provision (a)(2)(ii) which exempts certain classes of leases entirely from the ER requirement. While statutory exemptions to the new requirement were created, the new amendments clearly intended to leave in place the already existing requirement applicable to those leases. Otherwise, activities under those leases would be left in a regulatory twilight zone. The Conference Report (p. 115) states: "The conferees, by recommending the enactment of Section 25 to the Congress, are not approving or disapproving existing requirements for development and production. It is hoped that the Secretary of Interior will apply existing law and regulation to tracts which have commenced development and production, and to other areas in the Gulf of Mexico, where development and production activities have been going on for a number of years, in such a manner as to limit bureaucratic red tape and otherwise minimize delays in the search for and production of oil and gas."

We believe that consistent with this statement of Congressional intent, previously issued leases should continue to be subject to the law, regulations, and approved plans in existence prior to adoption of the amendments. We believe this to be particularly important for activities in any frontier areas which may be exempt from the new requirements.

In order to satisfy the requirements of § 25(a)(3), the Director should be required in (b)(2) to publish a public notice regarding receipt of the development and produc-

tion plan and its availability for public review and comment. This is the only effective way to ensure that the public knows the information is available. In addition, copies should be sent within 10 days to interested members of the public who have requested copies in advance. The number of persons who have expressed such an interest should be taken into account in calculating the number of copies required of the lessee under (b)(1).

We recommend that (c)(3)(ii) be struck. Opportunity should be given to the Governor to review the plans on a case-by-case basis. The clearly-stated purpose and policy of the new law is to encourage state involvement activity in decisionmaking. This provision runs directly counter to the statutory intent.

We recommend that (e)(2) be revised to provide that the Director require such information whenever such information may be relevant to determining whether an EIS should be prepared or in actually preparing the EIS itself.

The criteria under (g)(1)(v) used in evaluating a development and production plan should be expanded to include the statutory requirement to eliminate or minimize harm to the renewable resources of the OCS (See *Commonwealth of Mass. v. Andrus* (1st Cir., Feb. 20, 1979)). In order to be consistent with the statutory provisions, the Director must also: (1) require modification of any plan which fails to make adequate provisions for safe operations or for the protection of the human, marine or coastal environment, including compliance with regulations issued under §5(a)(8) of the Act (See OCSLA §25(h)(1)); and (2) require disapproval of a plan which does not comply with the requirements of the Act or the applicable federal law, including the regulations issued pursuant to §5(a)(8) (See §25(h)(1)(A)). Neither of these statutory provisions are reflected in the proposed regulations.

Subsection (h)(1) must include the option of the Director's requiring further plan modification in the event the modified plan which has been submitted still does not meet the criteria.

Subsection (i)(2) must make clear that any revised plan must be subject to state review for consistency, just as the original plan was.

We recommend that a standard for review similar to that recommended under subsection (k) for exploration plans be incorporated into subsection (k) here. Furthermore, it must be made clear at the end of subsection (k)(3) that the statute requires any revision of a plan determined to be significant to be reviewed in accordance with the same requirements applicable to the original plan. Thus the criteria in (k)(3) present only some of the criteria which must be met if a significant revision is involved, in which case all the criteria set out in (b) through (h) apply.

There must be a separate provision stating that development and production plan activities be conducted pursuant to an approved development and production plan. If a lessee fails to do so, the regulations under (1) should spell out not only that the lessor may cancel, but that under specified circumstances the lessor will cancel. These should include instances in which the activities undertaken threaten serious damage to the human, coastal, or marine environment.

Subsection (m) should be amended to provide for state consistency review of any activity not described in detail in a previously-approved development and production plan, prior to the Director's issuance of a permit.

Again, we recommend a definition of "emergency situation" to prevent unwarranted deviation from the regulatory requirements.

Section 250.34-3 Environmental report

(a) *Environmental report (exploration).*—We object to the requirement that the environmental report be only "summary" in form, with only "brief" descriptions called for. We believe these provisions undercut the potentially great utility and value of these reports. The term "brief description" connotes that a less than thorough and complete disclosure of information is required. Yet unless detailed descriptions are provided for under Items (1)(i)(A)-(G), the utility and reliability of the report will be limited. Therefore, we recommend deletion of the terms "summary" and "brief." We also recommend that, to ensure the accuracy and value of these reports, the rationale and methodology by which figures or estimates were arrived at should have to be provided. References should be provided. In addition, the information in the environmental report should include relevant information gathered by the Department of the Interior as part of the Environmental Studies Program or as part of any other information-gathering program (e.g., a hazards study). The information relied on should not be confined to the geographical area covered by the exploration plan since the ER must address onshore as well as offshore activities. We also recommend that the following additional information be included in the report: identification of precisely how onshore, nearshore and offshore facilities and operations will comply with the Clean Air Act, the Clean Water Act and the Coastal Zone Management Act; the location, size, number and land requirements (including rights-of-way and easements) of nearshore facilities (within

the 3-mile limit) such as lightering facilities and pipelines. We also recommend dropping the terms "directly" and "general" from the first sentence of (G) and adding the term "nearshore" (following "offshore").

(b) *Environmental report. (development/production).*—The information to be included in the Environmental Report should not be limited to that which is "applicable to the geographic area covered by the development and production plan." The development and production plan will focus on the offshore areas. Yet the impacts of activities conducted in these offshore areas will be felt beyond these areas and the Environmental Report which is designed to disclose these impacts and related activities therefore must be based on accurate, up-to-date information applicable beyond the geographic scope of the development and production plan. As stated above under (a), available, relevant information from the environmental studies program, hazards studies and other studies conducted by the Department and others should be incorporated into the ER.

For the reasons stated above, the term "brief" should be stricken from (b)(1)(i). Additional information which should be provided in the report includes: the location, descriptions (including maps), and size of any offshore, nearshore, and land-based facilities to be constructed or contracted for as a result of the proposed activity, including processing, refining, and distribution facilities; maps and other materials detailing the means proposed for onshore distribution of oil and gas resulting from the proposed activity, the routes to be followed by each mode of transport and the estimated quantities of oil and gas to be moved along such routes; a description of existing land and water uses in and adjacent to the areas proposed for facilities and operations; and identification of precisely how facilities and operations offshore, nearshore, and onshore will comply with the Clean Air Act, Clean Water Act and the Coastal Zone Management Act (including approved state coastal zone management programs).

The term "production" should be added following the term "development" in (b)(1).

The description of the environment in (1)(F) should not be limited to the offshore environment, but must include a description of the nearshore and onshore environment affected by activities described in the plan. Thus, to the phrase "leased lands" should be added the phrase "lands onshore or offshore which may be affected by offshore facilities, pipelines, tankers, and onshore facilities used in development and production." The lessee should also be required to incorporate the results and data from DOI's own studies of the affected area.

The discussion of alternatives to the proposed action should not be limited to those considered during plan development, but should include all reasonable alternative, and should be specifically directed to include a discussion of alternative pipeline and/or tanker routes to those proposed and alternative locations for related onshore facilities and operations.

Section 250.34-4 Compliance with the National Environmental Policy Act (NEPA)

Before turning to specific comments on this provision, NRDC wishes to reiterate a concern expressed in earlier comments (dated October 27, 1977) which should not be overlooked. A specific commitment has been made with respect to preparation of an EIS in the Sale 40 area, which may not be forgotten. The Secretary of Interior stated on March 1, 1977 that: "If an appeal is successful [of the U.S. District Court's decision in *County of Suffolk v. Secretary of Interior* invalidating Lease Sale 40 on NEPA grounds] I intend to require the preparation of an Environmental Impact Statement prior to approving developing plans for this lease." In addition, he stated that "[a]ll points raised in the suit will be considered prior to approval of the development plan and in consultation and review by the affected States and local governments."

The Interior Department was successful in its appeal. In the event oil and gas is found in paying quantities in the Lease Sale 40 area, the Secretary must adhere to his commitment which requires a pause between the exploratory phase and the development and production phases of OCS operations in the Lease Sale 40 area while an EIS is prepared. The appellate court cited the Secretary's commitment as one of its chief reasons for reversing the District Court:

"The Secretary has announced that before considering whether to approve any such plans [for development] a development plan EIS will be prepared, which will include a survey of the environmental consequences and feasibility of specific pipeline corridors and of any other problems relating to specific proposals for transportation of oil and gas actually found.

"With this program for consideration of environmental consequences according to development stages in mind, the question upon this appeal is not whether the Sale 40 EIS failed completely to discuss the environmental risks involved in transporting oil to shore from the tracts under consideration for lease but whether a limited

discussion, with the balance deferred until preparation of a Development Plan EIS, satisfies the "rule of reason" by which we are governed in determining whether there has been compliance with NEPA." *County of Suffolk, et al. v. Secretary of the Interior*, Slip op. at 15 (2nd Cir., August 25, 1977) (italic supplied).

In the conclusion of the decision, the court states: "We are satisfied that the Department of the Interior, which will have continuous control over the venture, will deal with them [environmental consequences of transportation] thoroughly in the Development Plan EIS before approving any plans for transportation of such oil as may be discovered in the Sale 40 area * * *." Slip op. at 42.

While the proposed regulations contemplate the possible preparation of an EIS on individual development and production plans, they do not assure the fulfillment of the Secretary's commitment, relied upon by the court, that there will be a pause between the exploratory phase and development and production phases in the Sale 40 area, at which time an EIS will be prepared before any development plans are approved. NRDC requests that changes be made in the regulations to address these points of concern.

We now turn to our more general comments on this provision. The regulations must provide that no development and production activities proposed by the lessee either offshore or onshore, as disclosed in the plan and ER, may be undertaken until an environmental assessment or EIS has been completed and the development and production plan has been approved. Otherwise, the entire environmental review process will be thwarted and the Director's responsibility under NEPA and the OCSLA to protect the human, coastal and marine environments will be rendered meaningless.

In the assessment prepared by the Director pursuant to subsection (a)(1), it should be specifically required that information gathered as part of the Department's environmental studies program as well as information from hazards studies and other studies conducted by the Department or other agencies be utilized.

The factors which the Director should give special attention to should be expanded to include: the amount and intensity of development and production proposed compared to earlier estimates; the location of pipeline routes in areas of potentially hazardous natural bottom conditions or in areas where pipeline burial is impossible or in areas of high ecological value or sensitivity; the location of structures near highly-productive fishery areas; the utilization of tankers near areas of high biological productivity; the location of nearshore or onshore operations or facilities in areas of ecological importance. The present list is much too circumscribed.

We strenuously object to the criterion articulated in (a)(4) for when an EIS shall be prepared. It is not enough that a prior EIS generally discussed the impacts of platforms, pipelines, onshore facilities. It is the specific significant impacts of a particular platform ~~and~~ of pipelines and onshore facilities in particular locations that need to be analyzed and discussed in an EIS. Unless the earlier EIS has considered the specific impacts, the fact that generalized considerations of similar impacts were discussed should not be found to be an adequate replacement. This procedure is consistent with the tiering process described in § 1508.28 of the CEQ regulations.

Further, if an assessment concludes that an EIS is not required, the regulations should provide that the procedures recently imposed in *Get Oil Out, Inc. v. Andrus* be followed. Thus, such an assessment must be made available to the public pursuant to the notice procedures and the public should be provided adequate opportunity to comment on that assessment. The Department should then re-examine its conclusions requiring the need for an EIS in light of the comments.

Under the proposed rule, the information required to be disclosed in the EIS is much less detailed than the ER. This is completely inadequate. If an EIS is prepared, the information in it must be even more extensive than the information required for the ER. The regulation should so provide. This is of crucial importance because the EIS is the most significant portion of the decisionmaking process and is the only document which provides to the public and that state and federal decision-makers independent analysis of the environmental impacts of the proposal. Unless the EIS provides the complete analysis of all the impacts of the proposal from platform, pipelines, other offshore facilities, onshore facilities, and transportation, state, and local governments to which the OCSLA delegate such important roles in the approval of these plans will be denied adequate information regarding onshore impacts necessary to their analysis. Moreover, the federal decisionmakers will be unable to conduct the "big picture" analysis required by NEPA.

The DEIS must be available before any public hearing is held.

Where two or more plans from the same area or region have been submitted within two months of one another, the Director should evaluate the two (or more) together in deciding whether to prepare an EIS.

Finally, the regulations should reflect Congress' intent that: "NEPA will be involved prior to approval of a plan when major or substantial development and production activities seem to be indicated for an area or region. In preparing, drafting, and reviewing the EIS, the conferees expect the Secretary of Interior to consider and address the cumulative effects of past and future OCS activities in an area or region." (H.R. No. 95-1474, *supra* at 117).

Thank you for your consideration of these comments.

The CHAIRMAN. The next witness is Mr. Edwin Rothschild, research director, Energy Action Education Foundation.

**STATEMENT OF EDWIN ROTHSCCHILD, RESEARCH DIRECTOR,
ENERGY ACTION EDUCATIONAL FOUNDATION**

Mr. ROTHSCCHILD. Thank you, Mr. Chairman. I appreciate the opportunity to testify before the committee this morning.

I want to first concur and support a number of points that Hope Robertson made regarding the problems that are continuing to plague us in the promulgation of bidding systems and the problems that are being incurred in the debates, and discussions between the Department of Energy and the Department of Interior.

It is my understanding that they have set up some procedures to promulgate these bidding systems and that there are no time constraints on these procedures. They have informal review proceedings and, at the time they complete those proceedings, they go into a formal proceeding where the DOE submits its proposal and DOI has 30 days to respond. As yet, there have been no—as I understand it, formal proposals made. They have remained in the informal stage, and these informal stages have no time limits, so this haggling goes back and forth.

It is also my understanding that with respect to the sequential bidding systems that has been proposed by DOE, which is still in Interior, the people at Interior, the officials at Interior are not looking forward to seeing that particular proposal come into effect. It is my understanding that they would prefer to see the profit share as the first one to come out, but that is still, as you know, in the debate stage, the discussion stage.

It is also our concern, which we expressed to you in the December hearings, that the competition review regulations, both by the Department of Energy and Department of Interior, and as required under the act by the Justice Department and Federal Trade Commission, have not been promulgated. The Department of Energy had been considering making a competitive review proposal for postsale review where they would announce—ahead of the sales—the criteria used to judge the competitiveness of a sale and competition for tracts. There has been a letter sent by the Justice Department, it is my understanding, to the Department of Energy, and that proposed regulation has been dropped.

Now, that creates a problem. If there is no competition review and the Justice Department makes a decision that it is not going to review a sale, then there will be no review of the sale by the Department of Energy which has responsibility to insure competition on the OCS. I think that it is imperative that the Department of Energy have such regulations so that in case the Department of Justice decides not to hold a competitive review, that there can be such a competitive review made. These problems have come up in the past.

We mentioned the first with respect to sale 65, that there was no competitive review, and that the Justice Department did not consult the Federal Trade Commission as it is directed to in the act. We have made that statement for the record.

Subsequent to our testimony, another lease sale was conducted, in the Gulf of Mexico, and the Justice Department merely discussed the letter that it sent to the Department of Interior, to Secretary Andrus, with the Federal Trade Commission. There was also no consultation on that review.

The CHAIRMAN. Is that a written discussion or personal discussion?

Mr. ROTHSCHILD. As I understand it, it was not a written discussion. It was a discussion over the phone on the day that they sent the letter over to the Department of Interior, the letter was sent over to the Federal Trade Commission. It is my understanding, subsequent to that, they have now sat down and begun to set up a structure and a program whereby they can have full consultation.

We wrote a letter, and I will submit it for the record, on February 2 to Mr. Alfred Dougherty, the Director of the Bureau of Competition, citing the problems that we saw and asked the following questions: We wanted to know whether or not the consultation had taken place with respect to sale 51 and the form of such consultation and the number of times as well as hours spent that staffs of each agency met to discuss the review of sale No. 51 and what procedures were implemented which define the degree, scope, and consultation process as it applies to competitive review of OCS lease sales. And we requested copies of any documents, analyses, and so forth, submitted by the FTC regarding sale 51.

It is my understanding that a letter in response to our letter is now on Mr. Dougherty's desk, and I have an understanding of what it contains having had some discussion with officials of the agency. They will say that they have had a discussion in the context of sale 51, even though they did not do a competitive review for that sale, and out of that process they thought it would be better to use their resources to gather the necessary information in an area of the sale.

It seems that in the Justice Department letter to the Department of Interior they had insufficient information to make a competitive review and, therefore, they did not make a competitive review. And so FTC and Justice decided what they would do would be to put together the data base so that in future sales they will be prepared to make a competitive review.

It is also my understanding that the FTC has made some suggestions to Justice on how they could work together and request data from the Department of Interior, and how they would expedite such requests. They will also try to work out jointly the data base.

It is also apparent that without a data base, a 30-day review period is insufficient time in which to conduct a proper review. They have no time to gather the data that they did not have and then to also make a complete analysis.

It is also my understanding that if FTC and Justice disagree, they will both reserve their respective positions. Now, FTC and Justice are talking together, but that fact does not explain why Justice in two sales failed to consult with the FTC.

We now have a third sale that has taken place, and given the Justice Department's claim in the January 18 letter to Secretary Andrus, that it did not have sufficient information to conduct a full competitive review, I expect there will also be no competitive review for sale No. 49 despite the fact that competition for the tracts was almost nonexistent.

Now, just a few comments on sale 49, the second Baltimore Canyon sale. We wrote a letter to Secretary Andrus regarding that the holding of the sale was not in line with his previous announced August 1977 5-year leasing schedule in which he claimed that there should be 3 years between lease sales in frontier areas. As you know, the first Baltimore Canyon sale 42 had been delayed and drilling had not begun until approximately 18 months after the date of the sale, which left a very short amount of time, roughly a year, for the drilling to occur. Eleven wells have been drilled. We wrote and said that we did not think that the industry nor the Department of Interior had sufficient information because of the lack of time to do the proper drilling, that the sale, therefore, should be postponed until such time that there was adequate information available. We were answered by Deputy Assistant Secretary Larry Meierotto that they believed that they had adequate information to evaluate the sale. I will submit those letters for the record as well.

The sale was held. As you know, there were very few bids, very low bidding, not much interest in the sale. Subsequent to the sale, I spoke with one high Interior official who said one of the reasons for that was there had not been enough time for wells to be drilled. Only 11 wells had been drilled. So, after all, we did not have that knowledge. But I said that is what we wrote to the Secretary. It seems that the Secretary wanted to keep to his schedule, no matter what, and that is what he did. I was at an NOIA—that is the National Ocean Industries Association—meeting where the Secretary gave the keynote address, and he said in his new leasing plans, he was going to propose new lease sales and that, as in the past, he would keep to them and they had his word. And if there were any outside groups who came in to oppose the sales or delay the sales, he would have four backup sales.

He also told the industry that he was very firmly committed to due diligence, and if any company was granted a lease and did not perform within the specified period of time, those leases would have to be given back, which I think is an admirable position. But we have not yet seen any due diligence regulations from the Department of Energy. We are still waiting for those as well and, as I understand it, the only thing that they are doing right now is analyzing the data to see how they are going to fashion due diligence regulations, if they are going to fashion them at all.

I think essentially that concludes my statement. I have reviewed the points that—excuse me, one other thing is that the Department of Energy—Department of Interior, excuse me, has proposed on-structure regulations to do onstructure drilling, and we certainly applaud that. We think that that should have been in place a long time ago so that the Government could have some idea of the value of the lands that it is putting up for bid, but it is better late than never. Thank you.

[The following was received for the record:]

ENERGY ACTION EDUCATIONAL FOUNDATION,
Washington, D.C., December 13, 1978.

HON. CECIL D. ANDRUS,
Secretary of the Interior,
Washington, D.C.

DEAR MR. SECRETARY: On November 13, 1978 the Department of the Interior announced that Sale No. 51 in the Western and Central Gulf of Mexico was to be the second sale held under the new Outer Continental Shelf Lands Act Amendments. The first sale to be conducted under the new Act, Sale No. 65, demonstrated that even under new authority, the Department has continued to rely on outmoded, ineffective methods which do not assure adequate competition and the receipt of fair market value as explicitly required by the OCS Lands Act Amendments. This conclusion is obvious from an analysis of Sale No. 65.

The Department in Sale No. 65 offered 89 tracts estimated to contain "between 15 and 150 million barrels of oil and 20-175 billion cubic feet of natural gas" (FEIS, p. I-1, Vol. 1). Yet, except for two tracts, all of the tracts bid on were evaluated by the U.S. Geological Survey to contain little or no oil or gas resources. 33 of the 35 tracts bid on by the companies were evaluated by the Survey at the minimum value (\$25/acre or \$144,000 per standard 5,760 acre tract). In addition, the information used by the Survey to make its estimates was of very low reliability. Indeed, the industry had as much confidence in the value of the tracts put up for bid as did the Department. This is clear from an analysis of the bidding patterns. Of the 89 tracts offered, 54 received no bids, 20 received 1 bid, nine received 2 bids, three received 3 bids, one received 4 bids, one received 5 bids and one received 6 bids. Thus, the average number of bids for all tracts offered was 0.7 bids per tract and the average for all tracts bid on was 1.8 bids per tract.

This sale also witnessed the continuing presence of joint venture arrangements led by major companies (Mobil/Amerada Hess; Shell, Cities Service and Sun; Chevron/Southern Natural, etc.). Because of these joint venture arrangements, eight potential bidders were eliminated, so that instead of 15 bidders there were actually only seven. It is also important to note that the major-led joint ventures tended to avoid bidding on the sliding-scale royalty tracts and concentrated most of their effort on the low fixed royalty high bonus bid tracts.

In addition to the small number of bidders (lack of competition for OCS tracts) and other potential competitive problems (impact of granting of leases on competition in relevant markets), the lack of knowledge of the potential resources in the lease area (as evidenced by the large number of minimum evaluations and the fact that the average bid exceeded the average evaluation by nearly 950 percent) can only result in the public's not receiving fair market value for its resources as well as in the misdirection of industry capital.

In a News Release dated November 16, 1978, the Department announced acceptance of all the bids, but there was no mention that the Secretary had made a determination with regard to the competitive review mandated by the OCS Lands Act Amendments (Sec. 205(b)(3)). Although the Department of Justice did not conduct a competitive review (see letter dated October 24, 1978) and even though the Justice Department did not consult with the Federal Trade Commission, a determination by the Secretary must still be made.

Since Sale No. 51 is being conducted in the same general area in which Sale No. 47 was conducted in June 1977, it is important to understand some of the results that have already been reported from the drilling of tracts from that sale. In an Oil and Gas Journal article entitled "Success Ratio High on June 1977 Leases in Gulf" (10/30/78), it was reported that:

"Operators haven't encountered any surprises. They generally have either found what their sophisticated exploration programs indicated was there in deeper waters or they have drilled discoveries in highly developed shallow-water areas."

Indeed, on the 29 tracts listed by the Journal the total amount bid was a little more than \$501 million versus a U.S.G.S. evaluation of just over \$60 million, 8½ times what was bid. Thus, even in an area where the greatest amount of information exists, the U.S.G.S. has been incapable of assuring the public fair market value in its pre-lease evaluations.

We hereby adopt by reference with respect to Sale No. 65 our previous correspondence to you (our letters of October 28 and 31, 1977, December 9, 1977, January 23, March 24, March 30, April 12, April 20, May 9, and October 26, 1978) relating to previous sales, and hereby formally notify you that for the reasons stated in the above-mentioned letters, and in light of the failure to correct the serious legal flaws, information gaps, procedural failures and violations of trustee responsibility, we

consider any leases let under this system to be presumptively illegal, beyond the power of the Department to confer, and potentially the product or result of reckless nonfeasance by the Department's officials and/or a continuing conspiracy by the oil industry and others to deprive the Federal Government of valuable public resources without adequate compensation. In addition the new law adds to or makes explicit responsibilities that we believe existed under prior laws, and thus provides additional grounds for concluding that the Department is not fulfilling its legal responsibilities.

For example, in previous correspondence we have pointed out that the Department of Energy Organization Act requires the Secretary of Energy "to prescribe regulations" which relate to "fostering of competition for Federal leases" and other provisions. Such regulations have never been promulgated and constitute a preexisting flaw in past leases. Now the OCS Lands Act Amendments explicitly require (Section 205(c)(1)) a competitive review by the Department of Justice and the Federal Trade Commission, yet in the absence of DOE regulations, there are no standards or procedures for this vital review process, thus voiding both the review process and the leases to which it applies.

We urge you therefore to postpone Sale No. 51 scheduled for December 19, 1978 in New Orleans, Louisiana until the leasing arrangements can be brought into full compliance with your legal and fiduciary responsibilities. Failing this we request you forthwith to notify all qualified bidders for that sale, either directly or through an immediate Federal Register notice, that this claim of presumptive invalidity of the proposed leases has been made, and may operate to vitiate some or all of purported leasing arrangements if the Department or a court ultimately sustains some or all of the bases for the claim. Although we believe that Section 23 of Public Law 95-372 has no application to our claims of illegality either under previous law or Public Law 95-372, to the extent that Section 23 may be construed to be applicable to us or others making similar claims, this letter should be deemed to be a notice on our behalf and on behalf of those who may assert similar positions for the purposes of Section 23.

Sincerely,

EDWIN ROTHSCHILD,
Research Director.

ENERGY ACTION EDUCATIONAL FOUNDATION,
Washington, D.C., December 29, 1978.

HON. CECIL D. ANDRUS,
Secretary of the Interior,
Washington, D.C.

DEAR MR. SECRETARY: In February 1979, the Department of the Interior intends to hold Sale No. 49 in the Mid-Atlantic region. Included in this proposed sale are tracts which are adjacent to tracts leased in Sale No. 40 as well as tracts which are to the northeast and southwest of the tracts leased in Sale No. 40. When you first announced the present five-year leasing plan, you stated: "There is an approximate three-year interval between the first sales in a frontier area and subsequent sales in the same geological province." and that: "* * * this interval would provide an orderly level of activity for both exploration and development and permit the use of exploratory results from one sale in making tract selections for a later sale." (News release, Aug. 23, 1977.)

Because acceptance of the bids was delayed by legal action, drilling in the leased area did not begin until March 29, 1978. Thus, by the time of Sale No. 49, less than a year will have elapsed between the beginning of drilling and the date of the proposed sale. Clearly, this amount of time is not sufficient for the collection of adequate data on which to base evaluations for Sale No. 49.

On November 8, 1978, you announced your intention to allow oil companies "to drill pre-lease test wells on the Outer Continental Shelf directly on geologic structures that could contain oil or natural gas." At that time it was announced by Dr. G. William Menard, Director of the U.S. Geological Survey, that "proposed revisions to existing regulations will be published in the Federal Register, with adequate time for public review and comment." As of today there has been no such notice published in the Federal Register. Therefore, since many of the proposed tracts for Sale No. 49 are in areas where there has been no pre-lease exploratory drilling, and since with additional time onstructure stratigraphic wells could be drilled, the Department has sufficient reason to wait until the regulations are in place and such wells are permitted before tracts are leased.

It is also our view that there exists a conspiracy by the oil companies to defraud the government and restrain competition in their bidding for OCS leases. The

companies have stated repeatedly that the Government, not the industry, collects the lion's share of revenue from the production of oil and gas from OCS when in fact the opposite is true. Second, various joint venture agreements and agreements between potential joint bidders tend to restrict potential competitors from bidding in certain OCS regions. This conspiracy results in a diminution of competition for OCS tracts which in turn deprives the public of fair market value for its resources.

We hereby adopt by reference with respect to sale No. 49 our previous correspondence to you (our letters of January 23, March 24, March 30, April 12, April 20, and May 9, October 26, December 13, 1978) relating to previous sales, and our testimony at the Department's E.I.S. hearing on Sale No. 49 at Atlantic City on June 28, 1978, and hereby formally notify you that for the reason above, for the reasons stated in the above-mentioned letters and testimony, and in light of the failure to correct the serious legal flaws, information gaps, procedural failures and violations of trustee responsibility, we consider any leases let under this system to be presumptively illegal, beyond the power of the Department to confer, and potentially the product or result of reckless nonfeasance by the Department's officials and/or a continuing conspiracy by the oil industry and others to deprive the Federal Government of valuable public resources without adequate compensation.

We urge you therefore to postpone Sale No. 49 until the leasing arrangements can be brought into full compliance with your legal and fiduciary responsibilities including but not limited to completion of the initial drilling program on the Sale No. 40 leases and issuance and implementation of the on-structure drilling regulations. Failing this we request you forthwith to notify all qualified bidders for that sale, either directly or through an immediate Federal Register notice, that this claim of invalidity of the proposed leases has been made, and may operate to vitiate some or all of purported leasing agreements if the Department or a court ultimately sustains some or all of the bases for the claim. Although we believe that Section 23 of Public Law 95-372, to the extent S. 23 may be construed to be applicable to us or others making similar claims, this letter should be deemed to be a notice, for the purposes of S. 23, on our behalf and on behalf of those who may assert similar positions with respect to Sale No. 49 or future sales.

Sincerely,

EDWIN ROTHSCHILD,
Research Director.
JAMES F. FLUG,
Director and Counsel.

ENERGY ACTION EDUCATIONAL FOUNDATION,
Washington, D.C., February 2, 1979.

Mr. ALFRED DOUGHERTY, Jr.,
Director, Bureau of Competition,
Federal Trade Commission, Washington, D.C.

DEAR MR. DOUGHERTY: On January 18, 1979 Assistant Attorney General John Shenefield sent a letter to Interior Secretary Cecil Andrus which purported to review OCS Sale No. 51. Mr. Shenefield stated that the Justice Department's conclusion was that there was an "insufficient basis to warrant a finding that award of the leases to otherwise qualified bidders in Sale No. 51 will create or maintain a situation inconsistent with the antitrust laws." According to the letter, Mr. Shenefield stated "we have discussed our views with the Federal Trade Commission's Bureau of Competition."

Sec. 205 of the Outer Continental Shelf Lands Act Amendments of 1978 states with regard to review of OCS lease sales that the Attorney General consult with the Federal Trade Commission in a number of specific instances. In explaining the meaning of the relevant provisions in Sec. 205, the Conference Report (No. 95-1474, August 10, 1978, pp. 96-97) states the following:

"* * * the Attorney General is to consult with the Federal Trade Commission in making any review, in securing information and in making recommendations. It is the responsibility of the Secretary of the Interior to provide such information as may be required to conduct any competition review. To avoid delays, and to expedite the review process, it is also anticipated that the Secretary will provide all necessary information (as requested by the Attorney General in consultation with the

Federal Trade Commission) simultaneously to the Attorney General and the Federal Trade Commission.

* * * * *

"* * * His [the Attorney General's] decision to undertake or not undertake a review, and to make or not make any recommendations must be after consultation with the Federal Trade Commission.

"It is anticipated that any report of the Attorney General will include a section containing the results of his consultation with the Federal Trade Commission, including any specific recommendations and comments submitted by the Federal Trade Commission. In the interest of maximizing the time the Secretary will have to review antitrust comments and recommendations, the FTC may submit a copy of its comments and recommendations directly to the Secretary."

The Conference Report also noted the FTC's independence in making its own investigation and gathering its own data on unfair methods of competition which authorities were not limited by the OCS Lands Act Amendments of 1978.

In view of the above, we would like to know whether or not such consultation at the enumerated decision points took place in connection with Sale No. 51. We would also like to know the form the such consultation and the number of times as well as hours spent that staffs of each agency met to discuss the review of Sale No. 51. In addition, we would like to know what procedures, if any, have been proposed and/or implemented which clearly define the degree, scope and other parameters of the Justice/FTC consultation process as it applies to the competitive review of OCS lease sales. Finally, we hereby request copies of any documents, analyses or comments submitted by the Federal Trade Commission and/or the Bureau of Competition to the Department of Justice and/or the Department of the Interior regarding Sale No. 51.

Sincerely,

JAMES J. FLUG,
Director and Counsel.

U.S. DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington, D.C., January 24, 1979.

Mr. EDWIN ROTHSCHILD and Mr. JAMES F. FLUG,
Energy Action Educational Foundation,
Washington, D.C.

DEAR GENTLEMEN: Secretary Andrus has asked that I respond to your letter of December 29, 1978, concerning a postponement of OCS Sale No. 49 in the Mid-Atlantic area. You urged that before proceeding with the sale, the initial drilling program on the Sale No. 40 leases be completed and the on-structure drilling regulations be issued and implemented.

We believe there is adequate information to evaluate the Sale No. 49 tracts because of the exploratory results from Sale No. 40, the offstructure COST well being drilled and the geophysical data which have been collected by the Geological Survey and the industry in preparation for Sale No. 49. We are encouraged by the hydrocarbon "show" on the stratigraphic test being drilled. While no conclusions about commercial discoveries should be drawn until the area is leased, it is important to know if conditions that allow generation of oil and gas are present in the area. It also points to the value of offering leases on the Continental Slope in order to evaluate further the hydrocarbon potential of the Baltimore Canyon area.

We also do not share your view that there is a conspiracy by the oil companies to defraud the government and restrain competition in their bidding for OCS leases. Our position on this issue has been presented in prior correspondence with Energy Action.

In conclusion, Secretary Andrus plans to hold OCS Lease Sale No. 49 this February. Our nation sorely needs additional, secure supplies of oil and gas and hopefully the offering of leases in the Mid-Atlantic will assist in meeting this need.

Sincerely,

LARRY E. MEIEROTTO,
Deputy Assistant Secretary,
Policy, Budget, and Administration.

The CHAIRMAN. Congressman Forsythe?
Mr. FORSYTHE. Thank you, Mr. Chairman.
Thank you for your testimony, Mr. Rothschild.

Your last comment was in reference to onstructure drilling. I would like to point out a story that appeared in the Washington Star, in which references to this question appear. Onstructure drilling really does not give us any information, according to Mr. Gunn, head of Petroleum Geologists. He talks about what did happen in the 11 wells that you refer to in the Baltimore Canyon.

Two of these wells were not onstructure, they were offstructure. The Texaco well, and the COST well which had significant traces of hydrocarbon, were not on the structure.

The other nine wells under lease were drilled onstructure and were absolutely dry. Mr. Gunn's proposition is that the nine dry holes drilled onstructure, in the most desirable area of the Baltimore Canyon, would not have given the Government more information. Instead they might have blunted information where the two finds have been made.

In view of that kind of information from a person very much involved in this industry, do you still think that this pre-lease onstructure drilling is really going to provide the kind of information that does contribute to the actual value of resources that may or may not be there?

Mr. ROTHSCHILD. I think it will.

First of all, the onstructure regulations will only allow companies to do onstructure. No one is being forced to do onstructure drilling. It is discretionary, if a company chooses to do so.

Second, the industry has always claimed, and so have the geologists, most of them, that most of the finds, not all of them, obviously, but many of the finds come from structures, and that structures are the best geologically defined kind of environment in which to find oil and gas. You do not always find it under structures, and you do not always find it offstructure.

If there was an onstructure well that had been drilled, it certainly would have dampened the enthusiasm, and lowered the evaluation, because the Department of the Interior would have directed its interests elsewhere.

Mr. FORSYTHE. If you find something that is good, then that enhances the area, and if you do not find something, people will say, well, let us look some place else. That is really my very point, because as I think we look at other frontier areas, Prudhoe, the North Sea, that very rarely are the early wells really the ones, and the North Sea, as I recall, it was the 38th well before we made a discovery.

In Prudhoe it was something like 19th. Because we had drilled in this so-called onstructure situation, had then diverted and gone someplace else, we would never know where we are going in this whole field, and it is that kind of concern that I have, that anything that purports to indicate on a one-hole basis that there is or is not hydrocarbons, is really misleading, and the competitive situation among the companies that get involved in this, one company goes for a cost well, well, they all have to join, because they would not dare stay out of that kind of situation.

So it is an awful lot of money that is really put into the ground, perhaps with far less than really good information, or information that is leading us where we have to go. We know this is not a science, we know that it is really more witch hunting, and we

would be better off by putting our money in the casinos there, if we want better return, than going to the frontier.

It is that kind of concern that I have, and I grant you that insofar as there is not a mandate, but there is a stated purpose by the Secretary, that he is going to do this. This is what bothers me, and I am just somewhat concerned about the constant thinking which we seem to have around, that this is the kind of way that you test the resource, and this is the way we know how to proceed from here on.

When I think, time and time again, the proof just does not indicate that it goes that way. We know one of those wells onstructure in the Baltimore Canyon, that they now believe that they may have gone right through. Well, I know instances in the gulf where two different companies tried to develop a lease, did not make it, a third guy came along and found that they were all going through the resource. These kinds of things indicate to me that maybe it is better off leaving this in the hands of those who have the expertise.

Mr. ROTHSCILD. I think you are still—we are still leaving this to the people that do the development. It is all being left to the companies, it is being left to the companies to choose what kind of wells they will drill.

I still claim that you get a greater amount of information from drilling those kinds of wells, whether it is positive or negative, you still learn a great deal more that you did not know before, and it gives the Government more information, especially information that is needed to adequately assess and evaluate that property.

I think the Government would be violating its trustee responsibility, the Secretary of Interior would be violating his trustee responsibility, to the public to, in effect, lease tracts without having any idea what is there, especially with the bidding systems that we currently have, which do not return the most value to the public, but return the most value to the companies.

Mr. FORSYTHE. Well that, of course, gets into another area. But I think what you are telling me is that what we should be doing is Federal exploration, and only sell the resource, when we know what is there.

Mr. ROTHSCILD. I never said that.

Mr. FORSYTHE. Well, you are almost saying that. I did not say you said it.

Mr. ROTHSCILD. No, I think we should leave it to the companies. I think the Government should have the kind of authority to get information.

Mr. FORSYTHE. Well, they have complete authority to get all the information from every company that goes down in a lease.

Mr. ROTHSCILD. I think they should have the flexibility to have onstructure, as well as offstructure wells, that is all.

Mr. FORSYTHE. Well, we have a difference.

Mr. ROTHSCILD. We do.

Mr. FORSYTHE. That is rather evident. But back to this regulation situation.

I gather that you would agree that getting these regulations promulgated is highly essential, if we are going to see a rational plan of development on the OCS.

In other words, we need to keep the heat on the agencies to keep this thing moving.

Mr. ROTHSCHILD. Absolutely. Once they agree to the kind of regulation they are going to propose, we still have to have 60 days, I think for public comment, so we are still quite a ways away from the time that we are going to have those regulations in place and operating.

Mr. FORSYTHE. You are exactly right. As a matter of fact, only about a third of those regulations have been published for comment. So that we still have a long way to go.

Do you believe that there would be any better way for Congress to play the role that it must play through oversight, than a committee whose sole attention is directed specifically to this one area?

Mr. ROTHSCHILD. I think in December Mr. Flug answered that question, and I think he stated if this committee did not have oversight, that one committee would have oversight of this particular area so that there would be continuing oversight.

Mr. FORSYTHE. Well, there must be one committee having comprehensive oversight.

Mr. ROTHSCHILD. I think it was Mr. Flug's statement in December that the Congress should decide how it was going to have oversight, whether it was a single committee, or a number of committees, that was up to the Congress. We would hope that the oversight responsibility would be continued, whether it is in this committee, or in another committee.

Mr. FORSYTHE. You are very helpful in recommending many things, but not to help Congress make this decision, I gather.

Mr. ROTHSCHILD. I wish I could be more helpful, but the Energy Action Education Foundation, has not taken a position on whether this committee or another committee should be responsible for the oversight.

The CHAIRMAN. Would the gentleman yield?

Mr. FORSYTHE. Yes.

The CHAIRMAN. I think the question is not who performs the oversight, but that the oversight is performed, and performed in a comprehensive, responsible manner, and what our recommendation is, of course, is to have this committee, with its expertise, perform the oversight.

I think there probably will be a jurisdictional question that can be crossed at a later time, but I think to permit what we have seen happen so far, since October, with the only movement in the executive branch precipitated by our first day of the oversight hearings—we see the flurry in the Federal Register, and we see the flack downtown, and we see discussion between departments consisting of nothing, as you said, but a phone call.

It is to get this thing off on its right and intended foot; and I think that you have taken certainly a much more rational and responsible answer than some other people in the environmental community.

We said it should be performed cohesively and rationally. You do not have to pick the vehicle for it to have that attitude. You do not have to get into jurisdictional personalities of the Congress, or the executive branch, for that matter. But I think what you say is certainly appropriate.

Mr. ROTHSCHILD. Mr. Chairman, just one comment.

We are not an environmental group. We are a public interest research and education group.

The CHAIRMAN. Counsel?

Mr. O'BRIEN. Have you taken any position on the creation of a Department of Natural Resources within the executive branch?

Mr. ROTHSCHILD. No, we have not, sir.

Mr. O'BRIEN. You heard that earlier testimony where it was suggested that the creation of DNR might delay implementation of the OCS Act. Would you agree with that statement?

Mr. ROTHSCHILD. I cannot give you any answer, because we really have not addressed ourselves to that problem at this point.

If you would like to have an answer, I will get back to you, and submit it for the record.

Mr. O'BRIEN. Would you, please?

Mr. ROTHSCHILD. Yes.

[The answer referred to was not received for the record by the time this hearing went to press.]

Mr. O'BRIEN. Has the Energy Action Educational Foundation done any analysis in response to events in Iran and elsewhere with respect to the worldwide oil picture; specifically, have you responded to any of the statements made recently by Secretary Schlesinger and others with respect to the overall energy supply situation?

Mr. ROTHSCHILD. We are now in the process of doing an analysis, yes. It is not complete yet.

Mr. O'BRIEN. When will that be completed?

Mr. ROTHSCHILD. I expect it will be completed by the end of the week.

Mr. O'BRIEN. What would you hope to see, what part or role would you hope to see OCS production play in that analysis?

Mr. ROTHSCHILD. We hope that production from OCS will continue as it has, in playing an important part in supplying the United States with energy. The United States, as compared with other countries, for example, Japan, Germany, which import most of their oil, and most of their oil from OPEC countries, where they are totally dependent upon those sources of supply, they are being dealt with rather better than the United States, by its own companies, we have seen. Exxon and the other major companies are allocating the shortage worldwide, and it seems even though we are less dependent than any other country in the world, because we have all—we have enormous amounts of our own resources, not only oil, and gas, but coal and uranium, as well. We are being dealt a more severe cutback than those countries that are more dependent. So I just caution that swift development of OCS does not necessarily mean that we are going to get the energy any quicker.

In the past we have seen companies, and this is the due diligence problem that I alluded to earlier, we have had tracts leased, but no development for 5, 6, 10 years, and the companies coming into the Department of Interior, getting suspension after suspension, which does not get you any more oil and gas. Just because you increase the number of lease sales does not mean that you get more gas.

Competition may decrease, the industry is incapable of going out and doing an adequate exploration job for such a large number of tracts. So I just throw out this note of caution—increasing the

amount of tracts per year that are leased does not necessarily mean that we are going to get any more oil and gas. Diligence has to be performed so that they can produce the oil and gas.

Mr. O'BRIEN. How many personnel do you have here in Washington in support of your operation, including yourself?

Mr. ROTHSCHILD. Right now we are staffed at the level of four.

Mr. O'BRIEN. How many would you say that the Seven Sisters have in Washington?

Mr. ROTHSCHILD. In Washington—does that include their staffs that they have in their own offices plus the consultants and the attorneys?

Mr. O'BRIEN. Yes.

Mr. ROTHSCHILD. API and so forth?

Mr. O'BRIEN. Yes.

Mr. ROTHSCHILD. Hundreds.

Mr. O'BRIEN. How many would you say?

Mr. ROTHSCHILD. I do not know; 300 or 400, 500 probably.

Mr. O'BRIEN. How many committees do you now appear before in advocating the views that your organization holds?

Mr. ROTHSCHILD. We appear before as many committees as would like to hear us.

Mr. O'BRIEN. How many would you say that is, roughly? How many committees in both the Senate and the House? How many appearances are your four people required to make to advance their viewpoint?

Mr. ROTHSCHILD. It all varies on what hearings are being held, but I would say the Energy Committee in the Senate, the Antitrust and Monopoly Subcommittee are the two that we appear before on a regular basis. The Energy and Power Subcommittee of the Commerce Committee and this committee, and possibly the Interior Committee.

Mr. O'BRIEN. So it would make your job considerably more difficult if you had to appear before even more committees than you have to appear before now?

Mr. ROTHSCHILD. I think the focus of our concerns are so narrow that it would be one more committee. I think our concerns would be covered by one committee.

Mr. O'BRIEN. What committee would that be?

Mr. ROTHSCHILD. I do not know where that—is it Energy and Power probably would take that responsibility or Interior?

Mr. O'BRIEN. Do you think from your knowledge of groups like your own and other similarly situated groups in Washington that it would be more difficult as a general rule to appear before 10 or 11 committees than it would be to appear before this one with respect to OCS matters?

Does it not diminish your effectiveness by subdividing your own effort and requiring you to appear before a vast array of panels, and does it not really serve the interest of Seven Sisters and their representatives who outnumber you 20 or 30 to 1 because they do have the money and resources to appear before those groups whereas it seems that you have lesser resources?

Mr. ROTHSCHILD. We certainly have fewer resources. I think it is true that we are going to be outnumbered. I am not certain that if the responsibilities of this committee are transferred to another

committee, that it will necessarily diminish our ability to testify. If it gets beyond one or two committees, certainly we will be under more constraint given our limited resources.

Mr. O'BRIEN. How do you support the Energy Action Educational Foundation?

Mr. ROTHSCHILD. We are supported solely by private donations of individual citizens.

Mr. O'BRIEN. Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Mr. Rothschild.

The next witness is Mr. John H. Lyons, president, International Association of Bridge, Structural and Ornamental Iron Workers, and he will be accompanied by Mr. William M. Lawbaugh, director of legislation, International Association of Bridge, Structural and Ornamental Iron Workers.

It is a pleasure to see you once again.

STATEMENT OF JOHN H. LYONS, GENERAL PRESIDENT, INTERNATIONAL ASSOCIATION OF BRIDGE, STRUCTURAL, AND ORNAMENTAL IRON WORKERS, ACCOMPANIED BY WILLIAM M. LAWBAUGH, DIRECTOR OF LEGISLATION

Mr. LYONS. Thank you, Mr. Chairman, members of the select committee. It is a pleasure to be here before you today. I am speaking on behalf of a significant number of the 182,000 Ironworkers in the United States and Canada whose jobs in the offshore construction industry are directly and indirectly affected by these deliberations here today.

The matter I bring before you today extends much beyond the livelihood of our members. It impacts on the American economy and ultimate fairness in U.S. trade policy.

Specifically, the matter which I bring to your attention involves a clear case of special application of trade policy involving millions of dollars lost to the U.S. Treasury for two offshore platform jackets which will soon enter U.S. waters in California.

On February 28, 1979, President Carter issued an Executive order which covered more than 800 changes in the Generalized System of Preferences. All of these changes became effective March 1, 1979, except for the matter at hand. For reasons not set forth in the decision, the recommendation to the President by his trade advisers, which he signed, removed offshore drilling platforms from the GSP in a manner different than the 800 other changes in that order by way of establishing an effective date of 1 year later, specifically March 1, 1980. Given the unusual nature of a solitary exception among 800-plus items, it is apparent that someone or some group is seeking special privileges since there is nothing in the written record in this case to justify such exception. This solitary exception deserves your attention and action in order to enforce the intent of Congress on this matter and to insure equal treatment under the laws relating to U.S. trade policy. This is particularly so since the referenced GSP decision related to the second of two specific rulings that U.S. Customs made within a single document, dated May 11, 1978, pertaining to a specifically identified item, whereas this committee held hearings and acted upon the first ruling in that document and did not see fit to take any exception whatsoever to the effective date of its clarification of

existing law that was created by the improper ruling of the U.S. Customs Service.

Following is a brief review within the framework of information available to us as to how this strange situation developed.

Sometime prior to May 11, 1978, two major oil companies solicited separate bids for jacket and deck sections to make up three offshore platforms to be installed in the Santa Barbara Channel. Apparently, after that solicitation, a question was directed to the U.S. Customs Service describing two platforms connected together with a 200-foot bridged walkway. The platforms described and the question presented to U.S. Customs Service appears to be two of the three platforms on which bids were requested.

On May 11, 1978, Salvatore Caramango, Director of the Classification and Value Divisions of the U.S. Customs Service, issued a most unusual ruling, again apparently relating to the platforms being bid. He ruled that duties are not applicable on offshore platforms until two major components of a platform; namely, the jacket and deck sections, are assembled together which would mean that these multimillion-dollar components could come into the OCS duty free. The ruling stated:

It is our position that each platform will not be considered a fixed structure until the jacket and deck are assembled at the site of erection and ready to receive outfitting and ancillary equipment such as cranes, towers, elevators, connecting steel, walking bridge, and living quarters. Each platform, consisting of jacket and deck, will be considered a fixed structure under the Outer Continental Shelf Lands Act at this point. Such ancillary equipment, including drilling and production machinery, supplies and furnishings, imported to these platforms will be considered imported into Customs territory and subject to duty. In the absence of a full and complete description of the equipment, we are unable to give you definite advice concerning the rate of duty applicable.

Then Mr. Caramango went one step further in the final paragraph of the two-page ruling to say that the 9.5 percent ad valorem tariff could be avoided altogether if the platform came from a GSP-eligible country like Malaysia. He ruled:

Merchandise classifiable under item 652.98, TSUS, which is a product of Malaysia may be entitled to duty free treatment under the Generalized System of Preferences (GSP), if the requirements for eligibility are met.

Now, you will note in that statement that he did not specifically classify that platform under 652.98 TSUS. It had never been classified, to the best of our knowledge. That was the only reference made to it in the record.

The bid opening occurred after the Caramango ruling and all three jacket section low bids came from Japanese and Southeast Asia firms, and they were awarded the contracts. Hundreds of our members were eliminated from this potential work as a result.

We quite naturally were disturbed since, prior thereto, all west coast offshore platforms had been fabricated on the west coast and the skills of thousands of our members have been utilized in such construction. It was not until some time later that we learned of the very unusual ruling of the U.S. Customs, dated May 11, 1978. When we heard about this ruling, we were disturbed that our trade laws apparently could be twisted in such a way as to encourage importation of heavy industrial, high technology items such as offshore platforms.

The U.S. Customs ruling was brought to the attention of Congress and the OCS conference committee held hearings last autumn. The conferees determined that Customs misinterpreted the law and that normal duties shall apply to offshore platforms, stating:

The Conferees were informed that the United States Customs Service has interpreted existing section 4(a)(1) to mean that foreign-built production platforms are not subject to import duties when they are brought into OCS waters and attached to the seabed. Specifically, the Customs Service has stated that such platforms are not actually being imported to the United States until they are placed on the shelf and need not pay customs duties. The Conferees reject this interpretation and believe it is contrary to the intent of Congress in enacting the 1953 Act. Moreover, to make it explicit that this interpretation should not be continued to be given effect, the Conferees state that one of the purposes of this change in 4(a)(1) is to make it clear that U. S. custom duties are to apply to platforms built overseas, and brought into OCS waters for placement so that it can be used to develop and produce OCS minerals.

The conference committee in this ruling quite properly addressed itself to only one of the two parts of the May 11, 1978, U.S. Customs ruling. Again, we call attention to the fact that the conference committee made no exceptions as to an effective date of its clarification. The second part of the ruling did not clearly involve a question of law as did the first part, but instead involved a question of appropriate classification under law for which established appellate procedures existed. Accordingly, this international Association protested to the Trade Policy Staff Committee the fact that OCS drilling platforms described in the ruling were not properly classified by the ruling and did not meet the intent of Congress to grant duty free treatment for items imported from less developed countries (LDC). We filed a protest petition with the Office of Special Trade Representative on October 23, 1978, and requested an emergency consideration of the petition. Numerous Members of Congress, trade unions, and American manufacturers supported our petition, and a hearing was granted to be held on January 24, 1979.

We contended, and still contend, that offshore platforms were never intended to be on the GSP list of items subject to preferential tax treatment and asked the Office of Special Trade Representative to recognize that fact.

As our January 24 hearing approached, we discovered that a U.S. company, Brown & Root, Inc., of Houston, Tex., opposed our emergency petition along with only one other, the country of Singapore. At the hearing before the TPSC, the organizational structure of the company performing the work was established and identified as an American company; namely, Brown & Root. This, we believe, was the first time in history that a U.S. company attempted to fabricate offshore platforms overseas that were to be installed in U.S. waters, and we contended that the GSP was not established to benefit runaway U.S. firms with special tax preference. The Company, at the hearing, did not claim in the recorded testimony that it had bid, on behalf of its wholly owned subsidiary in Malaysia, with an awareness of possible duty free privileges. Further, in the absence of such testimony, the company was asked to advise the committee if it had bid anticipating duty-free treatment. The company, in replying to the question by letter dated

January 30, 1979, contended it would not answer that question since it was "proprietary information."

No company clearly would make a false statement on such an issue. A simple yes, if challenged, would not involve any tax investigative process beyond that which any company has undergone on numerous occasions. It was most obvious that the refusal to reply to the question was a reply in the negative. The company had not been misled by interim U.S. Customs ruling that was later overturned. On the other hand, even if they made such contention, would that justify an exemption from the application of the law? This conference committee, in ruling on the first part of the U.S. Customs ruling, granted no exemptions. Further, I can conceive no comparable examples where an interim misinterpretation of the law, in effect, excuses compliance.

However, the TPSC, for reasons unknown to us, believed otherwise, and in the President's Executive order of February 28 a brief paragraph explained the decision:

1. Drilling platforms (part of 652.98, TSUS), (and I again want to reiterate that prior to that letter by Caramango, there had never been any specific classification in the record)—these are used offshore to drill for oil and until recently the United States was the only country building them in large numbers. Certain beneficiary developing countries have the capacity to construct these items, and one developing country, Malaysia, plans to ship two structures to the United States this year. The petitioner, the Bridge, Structural and Ornamental Iron Workers Union, fears a loss of contracts and jobs if GSP duty free treatment continues on this item. Petitioner is widely supported by organized labor as well as by a large number of Congressmen. It is recommended that this item be removed from GSP effective March 1, 1980. This compromise will not penalize the beneficiary developing country which has let contracts this year with the understanding that they would receive GSP duty free treatment. At the same time, the compromise is responsive to the petitioner's request.

It should be noted that certain parts of the decision quoted above are inaccurate. Specifically, the country of Malaysia did not let contracts this year with the understanding that they would receive GSP duty-free treatment. The award was made to a U.S. company, Brown & Root, Inc., not Malaysia; last year, not this year; and, as Brown & Root's testimony of January 24 clearly shows, not with the understanding of duty-free treatment.

We contend that this most recent of a series of loopholes in trade policy is not the intent of Congress. The facts are very clear in this matter. Special interest application of trade law has been attempted since May of 1978, and it is incumbent upon this subcommittee to act quickly and evenhandedly to clearly set forth the intent of Congress or the applicable law and eliminate loopholes that can be generated by an effective date. The country of Malaysia will not be affected one way or another. No one has claimed damage. However, the U.S. Treasury stands to lose perhaps millions of dollars if the OCS and trade laws are not properly interpreted.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Mr. Lyons. I certainly appreciate your very forthright statement detailing this issue, and I joined 58 of my colleagues in January in writing to the President concerning this obvious loophole.

Mr. Forsythe?

Mr. FORSYTHE. Thank you, Mr. Chairman.

Mr. Lyons, there is an area that you did not go into in your statement, but is of interest to this committee. I am not sure if you are completely familiar with the subject. I want to ask you to comment on it, and if you care, you may respond in writing.

On March 8, this committee informed the Department of Interior witnesses, that we knew they had completed their 5-year leasing schedule and that it contained four or five sales a year. They denied this, and the next morning they released the 5-year schedule, which did indeed recommend the four or five sales year.

The Department of Energy recommended seven sales. They informed us that the difference between Interior's and their schedule, represented a loss of 1 billion barrels of oil every 5 years.

Do you have any idea what this loss will be to your union?

Mr. LYONS. The difference between the 5 and the 7 years?

Mr. FORSYTHE. That is correct. If you lost 8 billion barrels of oil.

Mr. LYONS. I have not had any thoughts, prior to this, on that question, but I would indeed have an investigation made with respect to, at least within our capabilities of responding to it, and give you our reply.

Mr. FORSYTHE. It obviously is less jobs. If you can, I would appreciate a response.

Mr. LYONS Yes, sir.

[The following was received for the record:]

INTERNATIONAL ASSOCIATION OF BRIDGE, STRUCTURAL AND
ORNAMENTAL IRON WORKERS,
Washington, D.C., March 24, 1979.

HON. EDWIN B. FORSYTHE,
Ad Hoc Select Committee on the Outer Continental Shelf,
Washington, D.C.

DEAR CONGRESSMAN FORSYTHE: I am pleased to respond to your twofold question issued during the oversight hearings Wednesday, March 20, 1979, regarding leasing sales.

As I understand the situation, the number of lease sales must strike a balance between energy needs and environmental risks. While I do not, in this instance, speak for nonunion elements in this industry, I can assure you that union journeymen Ironworkers have a proven record on the West Coast of doing the jobs of fabrication and installation of offshore platforms with the greatest of ease, safety and ecological care. The enclosed issue of The Ironworker magazine for October of 1977 will serve to demonstrate the successful, safe and clean work of our members in this vital industry.

It is impossible to pinpoint exactly the effects of unemployment and oil-loss of an additional lease sale of one or two per year on our members, but both would be considerable. I tend to support DOE recommendations of seven lease sales per year, given the current Iranian oil situation and impending restrictions expected with full implementation of the Clean Air Act. I encourage you and the Ad Hoc Committee to eliminate unnecessary delays in offshore exploration, frivolous legal actions and administrative roadblocks. At the same time, I encourage you to consider safety, health and environmental safeguards. But in the balance, present conditions do warrant additional lease sales.

I am informed that we have a ready and capable workforce centered in Rhode Island to handle the Baltimore Canyon with qualified, but unemployed, journeymen Ironworkers. Situations such as that which I described to you Wednesday have resulted in idled but capable workforce ready for offshore work on the West Coast.

The matter I brought before you Wednesday reflects your concern for law enforcement to Secretary Andrus on March 19. Since the Administration agrees that offshore platforms should not be on the GSP eligibility list, and never should have been, simple justice demands even-handed, undelayed action. I anticipate that the Ad Hoc Committee will soon call Administration officials to justify their action to delay that simple one of the 800-plus action of February 28. We cannot allow the Administration to give special treatment to runaway firms when our own U.S.

industrial capacity must be utilized, now and in the future, to keep alive the technology and manpower needed for energy independence.

Sincerely yours,

JOHN H. LYONS, *General President.*

- [From the Ironworker, October 1977]

OFFSHORE DRILLING FOR OIL

Nineteen seventy-seven started out to be a good year for offshore drilling, beginning a new era in North American energy development. On the West Coast, an eight-year delay in offshore drilling for oil and natural gas was ended as drilling resumed off the shores of Southern California and Alaska. On the East Coast, 40 oil companies secured the leases to drill on 96 selected tracts offshore.

While the West Coast drilling activities picked up, the East Coast plans came to a halt when U.S. District Judge Jack B. Weinstein ruled that the Interior Secretary had violated the Environmental Policy Act in selling the offshore leases for \$1.13 billion. The affected area, known as the Baltimore Canyon oil field extending from Maryland to New York, was expected to produce as much as 1.4 billion barrels of oil and more than 9 trillion cubic feet of natural gas.

Then, just a few weeks ago, a higher court overruled Judge Weinstein and declared that the sale was legal. As a result, companies could begin exploration in the Baltimore Canyon by the end of this year.

At about the same time, the Interior Department slated 15 new offshore lease sales for 1979-1981, supplementing the current schedule of leasing new tracts in the Gulf of Mexico and Alaska's Cook Inlet this year. A complete illustration of offshore areas under or to be leased by 1981 is presented in drawings on these pages.

To give an idea of how much construction work is involved, Alaska and California can serve as examples. In just those two areas, as many as 171 platforms involving 2,820,000 tons of steel and 180,000,000 manhours of work are scheduled for 1977-1987. In addition to this work, several marine terminals will have to be built for crude oil and liquified natural gas.

LEGISLATIVE CHANGES

As this issue goes to press, Congress is debating amendments to the Outer Continental Shelf Lands Act (H.R. 1614 and S. 9). While big oil companies are bitterly opposed to the Act because of federal regulation and delays, enactment is all but certain. And, despite objections to the contrary, the new OCS Act may even expedite offshore drilling and development. One congressional committee chairman told this magazine that Judge Weinstein's blockage of East Coast development would have been impossible had the OCS bill been enacted last year.

However, disturbing reports are on the horizon, possibly meaning an erosion of American and Canadian jobs and a new flood of imported fabricated steel. Just a few weeks ago, some oil companies on the West Coast invited bids from Japanese and Korean steel fabrication and construction companies, suggesting a pattern of imports followed on the Alaska Pipeline Project. Nippon Steel Corporation of Japan, for example, produced, fabricated and loaded out four massive crude oil loading seaberths in Valdez Bay offshore Alaska. And from West Germany comes a report that new techniques for offshore liquified natural gas processing plants can allow "the fabrication of the process facility to be accomplished in one country and towed to the site, reducing tremendously the cost and expense of importing skilled expatriate construction labor." The Nippon platforms were towed all the way from Japan also.

At this writing, building trades officials throughout the country are trying to muster Congressional support for a "Build American" clause in the OCS Act, an amendment that would not be passed through House committee earlier but is expected to be introduced from the floor during debate. Naturally, some American oil companies, seeking maximum profits with cheap foreign labor and materials, oppose the "Build American" amendment, so a vigorous lobbying fight is expected. Great Britain and Denmark have similar citizen-preference clauses in their offshore work.

MODEL AGREEMENT

Anticipating the work opportunities for organized labor in this expanding field seven building and construction trade unions, including the Ironworkers, ironed out a milestone West Coast agreement with the offshore industry's prime contractors.

The model agreement, which went into effect January 1, 1977 for two years, has been adapted for East Coast operations as well. General President John H. Lyons serves on the President's Offshore Construction Committee and General Organizer Jake West serves as Chairman of the Agreement's Policing Committee. Presently, with no-strike and no-lockout guarantees, Ironworkers are on the rigs for 14 days and off seven days as work picks up in California. With the new leases in the Gulf and Atlantic, employers can be sold on the recent success of the West Coast Agreement.

Domestic steel producers inland and the maritime trades also greet the new surge in offshore oil and gas development. Both industries presently face a severe downturn in production and employment. The Seafarers joined in the General President's Offshore Construction Agreement and work is picking up for their members. The steel industry, mainly on account of cheap imports of basic and fabricated steel, continues to suffer. In the past few weeks, Bethlehem shut down plants in New York and Pennsylvania, suspended operations of four other mines and plants. The Johnstown Flood meant a cutback of 3,000 workers, and plans to build a \$70 million basic oxygen furnace there have been abandoned. Kaiser Steel shut down three steel plants and U.S. Steel has cut back its workforce drastically. The major reason: imports of steel from Japan and other countries, more than 3.6 million tons in May and June. A full push for offshore development could turn that situation around, especially with a "Build American" amendment in the OCS Act.

WEST COAST OPERATIONS

With the lifting of Judge Weinstein's ban on offshore drilling, construction activity along the East Coast has not yet begun. However, the West Coast operations were in full swing, and hundreds of Ironworkers were fabricating and erecting the huge platforms for oil and natural gas exploration.

The West Coast operations, too, were held up by a federal ban that lasted for eight years. In 1975 the moratorium was lifted in California's Santa Barbara Channel, and severe shortages of oil and natural gas finally prompted the Ford Administration to speed up the projected lease sale schedules and granting of drilling permits.

By 1976, offshore construction began to pick up, and industry hopes to find 14 billion barrels of oil and 28 trillion cubic feet of natural gas in the field off shore California, and Alaska is expected to yield 45 percent of the OCS oil by 1985 according to a recent Bureau of Land Management report. (The Pacific Coast will yield 22 percent, the Gulf 15 percent and the Atlantic 20 percent by 1985.)

Hondo

About 20 miles out from Santa Barbara stands the world's largest offshore drilling structure, the "Hondo," Spanish for "The Deep." Requiring over a million manhours to build and erect with members of Local 378 of Oakland and Local 433 of Los Angeles, Hondo can house 44 workers.

The platform jacket or structure weighs approximately 12,000 tons, has eight main legs, and is framed with X and diagonal bracing. The plan dimension at the water line are 45 feet by 125 feet and the base dimensions are 168 feet by 232 feet. The eight legs are 54 inches in diameter and the twelve skirt pile sleeves are 63 inches in diameter. The deck has three levels, 87 feet by 170 feet, with a total deck area of 40,000 square feet. It is comprised of six modular units and weighs about 1,600 tons. The height from the mudline to the top deck is 945 feet. The jacket was assembled in a horizontal position and in two section so that it can be transported by barge to the erection site. The top section weigh approximately 5,000 tons and the bottom section weighs approximately 7,000 tons. The jacket will be anchored to the ocean floor by 49 inch diameter main piles which will be driven through the legs and twelve 54 inch diameter skirt piles. J. Ray McDermott & Co., Inc. contracted with Exxon to perform the water phase of the work.

Steel used in the jacket was produced by Kaiser Steel Corporation at its Fontana Mill. The steel was transported to Kaiser's Napa and Fontana shops for forming and rolling into tublar sections. The tubular sections were fabricated into subassemblies which were then transported to Kaiser's Oakland Assembly Yard.

Sedco

The Gulf of Alaska is the site where the twin Sedco drilling vessels are now exploring the oil-rich area which may yield nearly half of all the OCS oil, which may reduce our import requirements for crude oil by as much as 30 percent within ten years.

The Sedco 706 and 708 are two identical semi-submersible drilling vessels Kaiser Steel has fabricated and assembled for Sedco Maritime, Inc., Dallas, Texas, Sedco

Maritime is a subsidiary of Sedco, Inc. of Dallas, the largest offshore drilling contractor in the U.S.

Each vessel contains 8,000 tons of structural steel fabricated at Kaiser Steel's plants in Napa and Fontana, California. Earl and Wright, Sedco's engineering division, designed the vessel and is the naval architect on the job.

The vessel's lower structure consists of two compartmentalized hulls 295 feet long. These hulls are designed to be flooded for drilling operations with the vessel submerged at 80 to 90 feet draft. Each hull is the base for four legs: two cylindrical-type caissons 30 feet in diameter and two intermediate caissons 18 feet in diameter. The 295-foot by 245-foot deck is 130 feet above the bottom of the hull. The vessel holds quarters for 96 men as well as drilling pumping equipment and a helicopter deck. With its derrick in upright drilling position, the vessel stands 330 feet high.

The derrick is designed to withstand the high winds and heavy icing that may be encountered off Alaska. A block in the derrick will hold the drill pipe. Riser-tensioners positioned around the drill floor will be connected to the riser pipe that brings up the cuttings. The riser-tensioners are pulley-like mechanisms that hold the riser pipe steady as the vessel moves up and down.

The vessel has a system of eight anchors, each suspended by 2,000-foot lengths of chain. This system, plus a complex heave compensator, will work to maintain stability so drilling operations can continue in up to 50-foot seas.

Both vessels will also be well-prepared to handle the constant threat of a "blowout". A highly sophisticated blowout preventor (BOP), as big as an ordinary room, will sit on the ocean bottom immediately above the drilling operation. It would act as a shutoff valve at the wellhead. The BOP can be activated hydraulically from any of three control points on the vessel if a blowout seems imminent.

The vessels also have a helicopter landing pad for easy accessibility when operating in remote waters. Equipment also includes a highly sophisticated diving bell and compression chamber, so drilling personnel may have a firsthand view of operations on the ocean floor.

Drilling vessels such as the Sedco 708 typically operate 24 hours a day. Between shifts, crews will spend its time in the two-story quarters building. Crew members will live in semi-private cabins. Recreation facilities on board will include ping pong and videotape movies. Four meals a day will be served in the 36-man mess hall.

Water for cooking, drinking, showering and laundry can be distilled on board at a rate of up to 1,200 gallons per hour. The quarters building will also contain the engine room, boiler room, machine shop and three diesel-powered electric generators, rated at 2,875 HP apiece.

Mr. FORSYTHE. I thank you very much.

Thank you, Mr. Chairman.

The CHAIRMAN. Counsel?

Mr. O'BRIEN. Mr. Lyons, from the point of view of the Ironworkers, is the issue which you just spoke to, now closed?

Mr. LYONS. Unless this committee can evaluate the issue that we have presented, and identify it within the framework of the OCS law as being contrary to the intent of Congress, which I do think they can, and instruct the TPSC Committee that the written record would not support a ruling that—which would give duty free preference, and request that they supply this committee with whatever material is in the record to support such an allegation.

I believe that that is within the prerogative of this committee, in overseeing the development of the OCS, whatever the items of importation, that trade policy is evenhandedly determined, so that there is not unfair competition in relationship to the items that are fabricated and installed in the OCS.

The competitive nature of these items is very tight. The differences between bids in American fabricating firms sometimes runs less than one-half of 1 percent difference, and if any favoritism can be obtained by way of duty-free treatment, or by way of interpretations, or misinterpretations of existing law, it would indeed be to the advantage, substantial advantage of any fabricator who would seek some loophole in the law, whether that loophole was a proper loophole, or improper loophole.

It is our view that there was no loophole here at all, prior to the May 11 ruling, there had never been anything in the record that would indicate what would be the classification on import of an offshore platform.

Mr. Caramango merely said that if it was in that classification—and came from a less-developed country—it could receive duty-free treatment. He did not say clearly—and there was no other record—that that was the proper classification, but it was implied, and it was this implication that we requested our hearing to upset, and we successfully did upset that. We established that it was not the intent of Congress in supplying the advantage to a less-developed country, by granting them duty-free treatment of the products they manufacture, to even slightly indicate that a very high-technology item, such as an offshore drilling platform, would be in that category.

Malaysia does not even have a steel industry. I think we established that it was a subterfuge to circumvent the law, and therefore they removed it, and placed it in a classification that that could not happen, but they set a date a year later, which means a windfall of about \$3.5 million to somebody at the expense of the American taxpayer.

I believe that this committee has both a responsibility and an entitlement to request from this TPSC that they supply this committee with the information in the record that would justify extending this for 1 year, which would, in effect, make an uneven-handed treatment of tax law in this one case, on this \$30-plus million contract.

Mr. O'BRIEN. Was construction in Malaysia done by a wholly owned foreign subsidiary?

Mr. LYONS. Of Brown & Root.

Mr. O'BRIEN. One hundred percent ownership was in Brown & Root?

Mr. LYONS. Brown & Root testified to the organizational structure of both the company in Malaysia and the steel company in Japan, both of which were in some various percentages or ownership by Brown & Root, Inc., of Houston, Tex. Their statements are in the record. We can make them available to you. That would be their description of the organization.

Mr. O'BRIEN. I appreciate that.

When did you first become aware that this was a wholly owned subsidiary of the corporation, and that activity was underway?

Mr. LYONS. In the hearing held January 24.

Mr. O'BRIEN. Were those witnesses there under oath?

Mr. LYONS. I do not recall.

Mr. LAWBAUGH. No, I do not think there was sworn testimony.

Mr. O'BRIEN. Are there any other loopholes similar to the one we are discussing here today, that you are aware of—attempts to circumvent the statute with respect to foreign employment?

Mr. LYONS. This was the first one that was ever imported into the United States from a foreign country, and there was two efforts at loopholes on that one. So I do not know how many other loopholes are out there, but I suspect somebody will be out there looking for them.

Mr. O'BRIEN. We have been approached by private sector representatives of private corporations who have indicated that we should scrutinize closely the regulations to be promulgated under new section 30 of the act, which speaks to the issue of manning and crewing on the OCS.

In fact, there has been one suggestion that foreign nationals who are not permanent resident aliens or U.S. citizens may be using a loophole in section 30 to bring foreigners in to work on the OCS.

The question is is this something that will be of interest to you, and will you be looking at those regulations that are coming out under section 30 in this particular matter?

Mr. LYONS. Yes, sir, because the east coast developments of the OCS, like the west coast, will produce many fabricating yards, to fabricate the components of the offshore drilling platforms, they will create many ancillary equipment and manning yards to furnish supplies back and forth, there will be substantial development on the east coast, which will be of great benefit to the east coast, which, as we all know, is seriously distressed because of runaway shops and fabricators to the Sun Belt.

This will be a great advantage to the economy of the east coast, and to our members, who fabricate both the deck sections, and the leg sections of these platforms. We will indeed watch very carefully these developments, to anticipate in fact that much of this would be subverted away to other lower labor rate countries.

Mr. O'BRIEN. Last week we had the vice president for exploration of the Exxon Corp. testify that it takes from 1 year to 18 months to build a rig. Under the Department of Energy's proposed accelerated leasing program, which calls for seven sales per year, will the shipyards and labor unions have the capacity to continue to produce rigs within that time frame?

Mr. LYONS. Absolutely.

Mr. O'BRIEN. Are those figures accurate, is it 12 to 18 months?

Mr. LYONS. That is approximate. That is very close, and the fabricating will be performed in either existing facilities in shipyards, or shipyards that have, shall we say, been abandoned, or they will be fabricated in newly created facilities that will be built. They will be spread all the way from probably the Carolinas to New Hampshire on the east coast, as it develops in the same manner as they are on the west coast.

Platforms are fabricated all the way from the State of Washington down to different parts of California.

Mr. O'BRIEN. One final question.

What was the differential in terms of what the actual construction cost in Malaysia? How much did they save there?

Mr. LYONS. That type of question was asked at the hearing, to the best of my recollection, and they would not—could not give specific figures.

Mr. O'BRIEN. Do you have a view on that, based upon your knowledge of prevailing wages here?

Mr. LYONS. We obtained pictures of that yard in Malaysia, and actually made accusations that they were, in effect, abusing the least-developed countries by having workmen under hazardous conditions. That would not be tolerated in the United States, with scaffolding, ladders scattered all over the legs. When the jackets

are assembled they are possibly 80 feet apart, and therefore they are about 80 feet in the air, the top two legs, and the bottom two legs are laid horizontal. The jacket section is assembled in a horizontal position, and then floated on barges, assembled together, and welded at the shore. The conditions of employment that were involved is scandalous, in fact it would do great harm to the American image of exploitation of human beings.

Mr. O'BRIEN. Thank you very much.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Mr. Lyons. We certainly appreciate your testimony this morning.

[The following letter was received for inclusion in the printed record:]

Brown & Root, Inc. 1730 Rhode Island Avenue N.W., Washington, D.C. 20036

(202) 223-0820



January 17, 1979

Chairman, GSP Subcommittee
Trade Policy Staff Committee
Office of the Special Representative
for the Trade Negotiations
1800 G Street, N.W.
Washington, D.C. 20506

Subject: Response to petition for Review of
Product Eligibility under the
Generalized System of Preferences
of Offshore Drilling and Production
Platforms (TSUS 652.98)
Case No. 78-180.

Dear Mr. Chairman:

This memorandum is submitted by Brown & Root, Inc. in opposition to the petition filed by the International Association of Bridge, Structural and Ornamental Iron Workers for the withdrawal of offshore drilling and production platforms (TSUS 652.98) from the United States Generalized System of Preferences (GSP).

Brown & Root, Inc., a Texas corporation with headquarters at 4100 Clinton Drive, Houston, Texas is an international engineering and construction company specializing in heavy construction. Since the inception of offshore drilling technology, Brown & Root has been a leader in the manufacture of offshore drilling and production platforms. Over these years Brown & Root has built and maintained permanent fabrication yards for offshore platforms in various areas of the world. One such location is Malaysia, home of Brown & Root (Labuan) Sendirian Berhad, a Malaysian corporation which was incorporated

August 30, 1971 with offices at 104 Chartered Bank Chambers, Kota Kinabalu, Sabah Malaysia. At present Brown & Root (Labuan) Sendirian Berhad is owned 100 percent by Brown & Root, Inc. As of December 31, 1978 the nationality of the employees of Brown & Root (Labuan) were: American - 10, British - 3, Australian - 1 and Malaysian - 621. Brown & Root is presently working with the Malaysian authorities to work out a plan to divest part of the ownership of this company to Malaysian citizens in accordance with their national goals to eventually have citizen ownership amount to more than 50 percent of all Malaysian corporations.

Discussion of Petition

1. Petitioners allege that the Outer Continental Shelf Lands Act Amendments of 1978 support removal of TSUS 652.98 from the Generalized System of Preference.

The petitioner has requested emergency action regarding the duty free treatment of offshore drilling and production platforms under the Generalized System of Preferences. The request is pursuant to the enactment of the Outer Continental Shelf Lands Act Amendments of 1978, Public Law 95-375, which overturned a May 11, 1978 ruling by the Customs Service that such platforms were duty free. This *

*Committee note: Only two pages were supplied for inclusion in the record.

The CHAIRMAN. Our final witness this morning is Mr. Gregory Sovas, chief, Outer Continental Shelf section, New York State Department of Environmental Conservation.

Welcome to the committee.

STATEMENT OF GREGORY SOVAS, CHIEF, OCS SECTION, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, ON BEHALF OF GOV. HUGH L. CAREY AND COMMISSIONER ROBERT F. FLACKE

Mr. SOVAS. My name is Gregory Sovas, director, office of Outer Continental Shelf development.

On behalf of Gov. Hugh L. Carey and Commissioner Robert F. Flacke, I am presenting a statement today representing the New York State position on the implementation of the Outer Continental Shelf Lands Act Amendments of 1978 by the Department of the Interior and the Department of Commerce.

This statement extends testimony presented to this committee in December by former Commissioner Peter A. A. Berle.

I would like to thank the ad hoc committee for this opportunity and I would like to reiterate our earlier congratulations to the Committee and especially Chairman Murphy for their fine work and perseverance in the passage of these needed reforms. As you know, the State of New York has vigorously supported enactment of the amendments as being necessary to insure a meaningful role for the States in the Federal leasing process.

We appreciate the efforts made by Secretary Andrus and the Department of the Interior in implementing the OCS Lands Act amendments and in working with coastal States to help resolve their concerns. Nevertheless, several important problems addressed in our earlier testimony remain critical today and must be resolved if the act is to be implemented as intended by Congress.

First, OCS grants—one of the most important of these is the status of funding for the OCS grants amendment, first proposed by New York State in testimony before the ad hoc committee in May 1977 and introduced in Congress by Chairman Murphy. The amendment authorizes very moderate but necessary funding to coastal States to undertake their responsibilities under the OCS Lands Act amendments.

We regret the lack of inclusion of funds for the OCS grants in the administration's 1980 budget request. States are being hard pressed to provide review, comment and information being requested by the Department of the Interior. Many States have been forced to use their own funds not so much to further the economic benefits of their State, but to protect their interests and existing industry. In short, States have had no choice but to participate in the Federal leasing program. Failure to provide funding to the States will seriously handicap their efforts to comply with and participate in the administrative, policy, operational and managerial aspects of the Federal leasing program.

Because of the urgent need for assistance to the States, because of the limited time available for action under the congressional budget process, and because of the proposed inclusion of the National Oceanic and Atmospheric Administration in the Department of Natural Resources under the President's reorganization plan, we

urge the committee to continue all necessary steps to make certain that the OCS grants amendment receives the supplemental appropriation. We greatly appreciate the diligent efforts Chairman Murphy and the committee have taken to date in support of the grants amendment.

Second, regulations for exploration and development plans—in our December testimony, we expressed concern over the suspension by the Department of the Interior, without consultation with the States, of State review of exploration plans. We have been pleased by the subsequent cooperation of the Department of the Interior in the interim in furnishing States with copies of exploration plans, although the 30-day period allowed under the legislation for Federal approval seriously limits the ability of States without approved coastal management programs to provide effective review and participation. In proposed regulations, Interior has attempted to respond to inconsistencies between the Outer Continental Shelf Lands Act amendments and Coastal Zone Management Act by providing for conditional approval of exploration plans within the 30-day period, while still providing for distribution of copies of exploration plans to the States.

The constraints of the 30-day period remain a problem. We question whether the Department of the Interior will be able to provide effective reviews and give conditional approval within this time frame. For this reason, and because the time limit effectively eliminates State review and participation for those States without approved coastal management programs, we believe that the 30-day time period in the legislation should be changed to 90 days to conform with the Federal consistency provisions of the Coastal Zone Management Act.

The artificial distinction between States with and without approved coastal management programs has resulted in reducing the review period for States without coastal management programs to a period less than the 90-day review allowed under the Federal consistency provisions of the Coastal Management Act. The Outer Continental Shelf Lands Act amendments policies and purposes refer to all the coastal States potentially affected by OCS development; whether or not a State has an approved coastal management program is irrelevant. For this same reason, we also believe that the OCS grants should be made available both to States with and without approved coastal management programs.

I should add that since our December testimony, we received one exploration plan for review, and we wanted to see how the review could be accomplished within the 30-day period. We had approximately 14 days to distribute the exploration plan and the environmental report to the affected parties, to coordinate all the comments, and to submit our response back to the Department of the Interior.

The content of exploration plans and environmental reports prepared under regulations in effect before enactment of the amendments has frequently left much to be desired. Although some companies have done an excellent job of addressing the problems associated with drilling in the specific tracts described in the plans and reports, other companies have provided no more than the general information contained in environmental impact statements pre-

pared before the lease sale. Certain geologic information presently classified as proprietary—for example, shallow seismic surveys undertaken before the exploration plan is submitted—is really environmental data that should be supplied to States for evaluation of geologic hazards. The Department of the Interior is preparing new regulations which we hope will help to resolve these problems.

On the matter of Federal consistency, we also believe that there is a need for a deadline for the Secretary of Commerce in acting on appeals of State-Federal consistency determinations. If the Department of the Interior gives conditional approval to an exploration or development plan, but a State determines it is inconsistent with the State's approved coastal management program, the company would have two options—to appeal to the Secretary of Commerce with an open ended time period for the resolution of issues, or to litigate. Given the lack of a deadline for action by the Secretary, it is not unreasonable to expect the company to litigate in such a case. We do not believe such a result was intended by the Congress.

Third, oilspill contingencies New York State's marine tourism and recreation industry is highly vulnerable to the adverse effects of offshore oilspills. A major spill could have substantial and long-term economic and environmental consequences. For this reason, as we pointed out in our December testimony, we are increasingly concerned by the fact that oilspill contingency planning is fragmented among the Environmental Protection Agency, the Coast Guard, and the U.S. Geological Survey. The review of exploration plans and accompanying oilspill contingency plans is accomplished, in most part, by USGS field personnel with little or no opportunity for input from EPA or the Coast Guard.

Further, it is difficult for States to determine the capabilities of industry oilspill consortia. It appears that these consortia are not regulated by any agency. In terms of meeting Federal consistency requirements especially with regard to assessing cumulative impacts, we believe that this situation could pose a problem in the future and may hamper the efforts of industry to explore and produce in a diligent manner.

We would like to see the law changed to include definitive roles of EPA and the Coast Guard, and in all oil spill contingency planning matters, and administrative procedures established in the interim to undertake a coordinated review with the respective agencies.

In conclusion, I would again like to thank the committee for this opportunity to present New York State's concerns regarding the offshore leasing process. Throughout the efforts to achieve passage of the Outer Continental Shelf Lands Act Amendments of 1978, the committee has consistently recognized that among the many needed reforms in the OCS process was the need to assure the States, and through States, local governments, opportunity to participate in policy and planning decisions relating to management of the resources of the Outer Continental Shelf. The enactment of the OCS Lands Act for the first time assures the States a role as efforts continue to develop the Nation's offshore energy resources in an environmentally sound manner. We commend the ad hoc committee and the chairman for the efforts they have made on behalf of the coastal States.

At the same time, we recognize that achievement of these and other important reforms of the offshore leasing and development process did not end with the passage of the amendments, but requires continuing administrative efforts by the Federal agencies involved. We believe the committee should continue to exercise its oversight function to insure that Federal agency actions are carried out in accord with congressional intent. The need for a continuing oversight role has become still more significant in view of the President's proposed reorganization plan, which would combine the ocean-related functions of the Commerce Department's National Oceanic and Atmospheric Administration with the OCS and other resource management responsibilities of the Department of the Interior into a new Department of Natural Resources.

We continue to believe, as we stated in our December testimony, that the committee has a responsibility to States to: (1) Insure that the mandates of the law are carried out with due diligence; (2) become a focal point within the Congress for the real concerns of the coastal States; (3) return fair market value for the Nation's energy resources; and (4) to assure that adequate Federal funding is made available to coastal States to carry out their mandates under the Outer Continental Shelf Lands Act Amendments of 1978.

The act establishes a process for the balanced and orderly development of the resources of the Outer Continental Shelf that will make these resources available to meet national needs, while at the same time protecting the human, marine and coastal environments. New York State looks forward to continuing cooperation and participation in this most important task.

Thank you.

The CHAIRMAN. Thank you, Mr. Sovas.

Unfortunately, the bulk of Congress failed to ask OMB for \$4 million that is necessary under the act to assist the States in carrying out their responsibilities that we required. I hope the State of New York has expressed its feelings on that matter to the Department of Commerce.

Mr. SOVAS. We have, both at the staff level, and at the executive level. There is presently a letter in draft form that will be signed by the Governor, and will be sent out in the next day or two. In addition, we have taken action with other coastal States along the east coast and through the National OCS Advisory Board.

As you know, we had two resolutions in favor of the OCS grants provision and the need for funding; both passed the National OCS Advisory Board by wide margins. We have been working with the New England River Basins Commission the coalition of Northeast States Governors, to gain their support.

Next week I have a meeting with the Mid-Atlantic Governors Coastal Resources Council and this will be an important item on the agenda. We intend fighting for this appropriation, and it will be a major point of discussion at the National OCS Advisory Board next month in Birmingham, Ala.

The CHAIRMAN. Mr. Hughes?

Mr. HUGHES. Thank you, Mr. Chairman. I have no questions.

The CHAIRMAN. Mr. Forsythe?

Mr. FORSYTHE. Thank you, Mr. Chairman. I have, I think, just one or two.

During our December 6 and 7 hearings, our colleague, the Honorable Leon Panetta of California, came before this committee and complained that the Department of the Interior was not giving equal weight to the eight criteria they consider when determining if they should or should not go ahead with a lease sale. These criteria are: (1) General information on the impact of leasing; (2) equitable sharing of risks involved in leasing; (3) location of the lease area; (4) other competing uses of the waters and coastline; (5) interest of the oil and gas developers; (6) State laws and resource goals; (7) environmental sensitivity of the area; and (8) the availability of information predictive of probable environmental impact before the leasing takes place.

While California is in the unique position of having ample supplies of crude oil, other sections of the country, including the Northeast and mid-Atlantic States, are not so fortunate.

My questions are do you feel that, to date, the Department of Interior is giving equal consideration to the criteria?

Mr. SOVAS. Well, I think it was expressed by the first speaker here today that they have a great deal of information. It is not organized effectively and, consequently, they do not put their best foot forward when they are trying to explain to you whether they have the information or do not have the information. We found this most evident in our lease sale 49. We asked that they withdraw 12 tracts because we felt they were significant environmental hazards. They came to us in Albany armed and loaded with data on why we should withdraw our recommendation, and we did. I see that as a continuing problem, that they have an information base, but that it has to be added to and organized properly to answer management questions and to use that information to make intelligent reviews and decisions on those reviews.

I should note that other Federal agencies also have a great deal of information that could be used in the Federal leasing program.

I see this more as a problem under Federal consistency where we will be locked in to make a decision, and I cannot emphasize strongly enough that we—the coastal States—are in this business for oil and gas. We are not out there to stop anybody. But we have responsibilities under the law and to coordinate with local governments and others to make sure that these things are done in an environmentally sound manner.

If we do not have basic information, we cannot make that decision. I should add that California has a somewhat different set of problems because of the proximity of exploration and development to their coast.

Mr. FORSYTHE. Thank you.

Under the provisions of Public Law 95-372, an exploration plan must be submitted to, and approved by, the States and by the Department of Interior before drilling may commence.

The States must issue or deny a CZM consistency certificate within 90 days, although up to 6 months may be taken under unusual circumstances, while the Department of Interior must approve or disapprove a plan within 30 days.

In my mind, these differing time schedules could cause some interesting problems. Do you foresee any difficulties with this situ-

ation, and what have you done to eliminate any possible difficulties?

Mr. SOVAS. We have stated all along that we see this as a potential problem. We really think that this is a place where industry would be within its rights to take whatever steps are necessary so that they are not locked into long delays. We have taken steps to accelerate reviews, and I think all the other coastal States really are sincere about this. We will process information as fast as we can. We are not about to holdup anybody who is sitting on a rig or sitting on a jack-up ship or whatever out there. We will do the review within the prescribed time period. I should note that we have been asked on occasion to do accelerated reviews and we have done that.

Basically, we do not have any money for our participation. We do not have the people to do these accelerated reviews so that if 5 or 10 came in together, we could not process these fast enough and would default on the reviews.

The problem with the 30-day review is that it is impossible for the State, without an approved coastal management plan, to review within a 30-day period. Certainly a State as large as New York has considerable constraints because of the sheer number of people who should be consulted in the review process. I really quite frankly do not understand how USGS could review it within a 30-day period, especially in the hazardous areas in the sale 49 area.

Mr. FORSYTHE. OK.

Well, that is very helpful. Thank you very much.

Thank you, Mr. Chairman.

The CHAIRMAN. Mr. O'Brien.

Mr. O'BRIEN. Mr. Sovas, I would like to quote from your statement and explore a couple of aspects after I have read it.

You say, "But a State determines it is consistent"—that is an exploration plan—"a State determines it is inconsistent with the State's approved coastal management program, the company would have two options, to appeal to the Secretary of Commerce with an open ended time period for the resolution of issues, or to litigate."

You go on to say that, "Given the lack of a deadline for action by the Secretary, it is not unreasonable to expect the company to litigate in such a case. We do not believe such a result was intended by the Congress."

Who would make the decision to litigate within the State government?

Mr. SOVAS. Perhaps my statement is not very clear.

The consistency determination would be made by the State on whether or not the exploration plan was consistent with an approved coastal management plan. If a State determined that an exploration plan was inconsistent, an operator could appeal to the Secretary of Commerce. Who would then make a determination whether or not the consistency determination should be upheld. Thus the oil company operator then would be forced to either go to the Secretary of Commerce on appeal, or to litigate.

What I am saying is that under the Federal consistency requirements, the Secretary has an open ended period to make a decision. He could take a year, 2 years, 5 years legally while that oil company is waiting for approval and losing money on a rig that has been

leased. We think that if Interior has to make a decision within a prescribed time period, then should be subjected to a similar constraint. Some time frame should be established.

Mr. O'BRIEN. Do you foresee likelihood of litigation because of that loophole?

Mr. SOVAS. Yes, I do.

Mr. O'BRIEN. What should we do?

Mr. SOVAS. I think that happened or was about to happen, as a matter of fact, in California. The industry took two paths. One, they appealed to the Secretary of Commerce and, two, they began litigation. Of course, litigation, as you know, does not get anybody anywhere. Therefore, I think you have to establish a time frame in the Federal consistency regulations for the Secretary of Commerce to make a decision relative to a Federal consistency appeal.

Mr. O'BRIEN. Another statement here confuses me somewhat. It says:

Further, it is difficult for States to determine the capabilities of industry oilspill consortia. It appears that these consortia are not regulated by any agency.

What did you mean by capabilities?

Mr. SOVAS. Well, for example, we are given a huge book that the oil companies distribute that says in Rhode Island, we have \$1 million worth of oilspill containment and cleanup equipment. We cannot tell you whether that is good, bad, or indifferent; whether that equipment can be moved quickly enough to the coast of Virginia, is capable of combating a spill, whether the people actually are trained and available at that place or on call, these are all important questions. The companies in submitting their exploration plans, submit their contingency plan based on the oilspill consortia that is established in Davisville, R.I. If there were two spills, one in the Baltimore Canyon and one in Georges Bank, who makes the decision as to where this equipment would be moved, and then does the whole idea of this approval breakdown since the consortia cannot be in two places at one time?

Mr. O'BRIEN. Has the State of New York done a study of the prospects for offshore development off New York's coast after the OCS Act of 1978?

Mr. SOVAS. Yes, we did. We did a very extensive study.

Mr. O'BRIEN. When was that published?

Mr. SOVAS. February of 1977, I believe.

Mr. O'BRIEN. Has there been any followup to that?

Mr. SOVAS. Yes, we did an update in October of 1978. But basically we structured the report using a scenario basis so the knowledge contained in the original report is still valid. Based on a high find, for example we could expect 2,800 jobs.

Mr. O'BRIEN. That is the most jobs that you expect?

Mr. SOVAS. Yes. The high side now. On the low side, it might be 200 or zero. So you could now make a hypothesis that there is a low probability of a high find, so there would be less than 2,800 jobs. We did a number of studies—environmental, economic, legal, institutional, and energy—to determine what the contributions the OCS resource would be to each segment of our economy and our environment. I can provide you with copies.

We think that, for example, the OCS oil and gas resource would be a very important supplemental source of energy for New York

State over a 20-year period. It may provide up to 28 percent of our natural gas and 5 percent of our oil needs. That again is based on a high find, and we can go to a chart, and make assumptions on the extent of resource that could be translated to impacts. That is why it is important, for example, in the OCS information program that is included in the legislation, to know how much resource can be expected. It gives us some idea of what we can plan for and what things may be happening in the future.

Mr. O'BRIEN. Thank you very much.

The CHAIRMAN. Mr. Kitsos.

Mr. KITSOS. I think it is important to point out that within the next month, Chairman Murphy and other members of the Merchant Marine and Fisheries Committee will be testifying before the Appropriations Committee to discuss, among other things, the OCS administrative grants about which you have spoken. I think it would be important for this committee and the Appropriations Committee to receive any statements coming out of New York, the Northeast Governors' Association, the Mid-Atlantic Conference or any other organizations of which your State is a member, with respect to positions taken on such grants.

[The following was received for the record:]

New York State Department of Environmental Conservation
50 Wolf Road, Albany, New York 12233



Robert F. Flacke
Commissioner

May 1, 1979

The Honorable John M. Murphy
Member of Congress
House of Representatives
Washington, D.C. 20515

Dear Congressman Murphy:

When I last testified before the Ad Hoc Committee, you asked that I send you any resolutions of support concerning the OCS State Participation Grants. At the most recent meeting of the OCS Advisory Board in Birmingham, Alabama, April 17-18, there was a long discussion about the importance of the OCS State Participation Grants, and specifically, the need for a supplemental appropriation or reprogramming of existing Coastal Energy Impact Funds. There was great concern that the Department of Commerce was not acting with due diligence in forwarding the reprogramming request for Fiscal Year 1980 to the Congress. In fact, some states continue to feel that the Department of Commerce will not request these funds.

Because of the continued concern of the Advisory Board members with funding for the OCS Participation Grants, the attached resolution which was passed at an earlier meeting was offered as a motion to indicate to the Secretary the strong support for this provision of the OCS Lands Act Amendments. The motion passed unanimously.

In the Board's discussion of the OCS State Participation Grants, a number of states asked why the OCS Grants were placed under the implementation of the Coastal Energy Impact Program. The implication of placing these Grants within the context of the Coastal Energy Impact Program is that states must have approved Coastal Zone Programs, or be working toward that end. A number of states felt that the OCS Grants should not be tied to coastal management program status, per se. Thus, a number of states who have chosen not to participate in the Coastal Zone Management Program will be ineligible to receive OCS State Participation Grants, even though they may be heavily impacted by OCS exploration and development. This situation is especially important in terms of the reorganization of federal functions within the proposed Department of Natural Resources. You may want to review this situation in light of the Oversight Hearings on the Coastal Zone

Management Act, as I anticipate that a number of states may ask that the OCS Participation Grants be moved to a functional OCS program area within the traditional jurisdiction of the Department of the Interior.

Should you have any additional questions or need any assistance, please do not hesitate to call.

Sincerely,



Gregory H. Sovas
Chief, Bureau of Mineral Resources

RESOLUTION URGING SPECIAL APPROPRIATION FOR OCS GRANTS
PROVISION OF THE OUTER CONTINENTAL SHELF LANDS ACT OF 1978

WHEREAS, the Congress has successfully completed work on the Outer Continental Shelf Lands Act Amendments of 1978 that will ensure the meaningful participation of coastal states; and

WHEREAS, the Federal leasing program imposes a substantial workload for coastal States at both the policy and technical levels; and

WHEREAS, following the initial Supplemental Grant, funding to States for OCS concerns has been limited by the lack of categorical funds within the Coastal Zone Management Act, thereby severely constraining State participation in the leasing program; and

WHEREAS, the OCS Lands Act Amendments of 1978 include the OCS Grants amendments to the Coastal Zone Management Act to provide funding to coastal States for their involvement with the policy, operational and managerial aspects of the Federal leasing program; and

WHEREAS, the OCS Advisory Board has strongly supported the OCS Grants amendment and has petitioned the Secretary to urge the Conference Committee to retain this provision in the final OCS Conference legislation; and

WHEREAS, coastal States immediately need OCS funding to effectively participate in the ongoing Federal leasing program;

THEREFORE, BE IT RESOLVED THAT, the OCS Advisory Board urges the Secretary to support and assist the Office of Coastal Zone Management, Department of Commerce, to seek a special appropriation of the full \$5 million authorization for the fiscal year 1979, for the OCS Grants amendment to the Coastal Zone Management Act.

August 28, 1978

Readopted by the Policy Committee at its April 17, 1979, meeting with the final paragraph amended as follows:

THEREFORE, BE IT RESOLVED THAT, the OCS Advisory Board urges the Secretary to request the Secretary of Commerce to approve the request by the Office of Coastal Zone Management to reprogram \$4 million in funds for the OCS State Participation grants for FY 1980.

Mr. KITSOS. I did want to touch on one element in the consistency issue. You raised an interesting point that has never been discussed before—and the imposition of a time limit on the secretarial override decision of a State nonconsistency decision. This is something that could be considered when the Congress reviews coastal zone management this year and next.

On what basis do you think litigation could be instigated, however, if the Secretary would not agree with the oil company? There is nothing in the present CZM Act that would authorize such litigation? On what basis could such a case be brought?

Mr. SOVAS. Well, I am looking down the line now, and it is not a question of whether the Secretary makes a decision or not—whether he is for or against the override—but that open ended period whereupon he does not necessarily have to make a determination.

Mr. KITSOS. The open ended period then would be the basis of litigation perhaps?

Mr. SOVAS. Right.

Mr. KITSOS. Thank you, Mr. Chairman.

The CHAIRMAN. Thank you very much, Mr. Sovas. We certainly appreciate your testimony.

The committee will stand adjourned.

[Whereupon, at 11:35 a.m., the committee adjourned, subject to the call of the Chair.]

[The following material was received for inclusion in the record:]

The Seafarers International Union

OF NORTH AMERICA • AFL-CIO

815 16th Street, N. W., Suite 510, Washington D. C. 20006

(202) 347-3504

PAUL HALL
President

March 19, 1979



The Honorable John M. Murphy
Chairman
Ad Hoc Select Committee
Outer Continental Shelf
3575 House Office Building,
Annex II
Washington, DC 20515

Dear Mr. Chairman:

The Seafarers International Union of North America, AFL-CIO, appreciates the opportunity to present its views on the Outer Continental Shelf Lands Act Amendments of 1978 (P.L. 95-322) and the need for continued existence of the Select Committee on the OCS. We have elected not to appear personally because of the failure of the U.S. Coast Guard to promulgate regulations implementing Section 30 of the Act.

As you know, Section 30 sets forth documentation, registry and manning requirements for OCS facilities and vessels. The provisions were designed to safeguard the employment of U.S. workers on America's OCS. The steady increase of foreign workers and equipment in U.S. waters demonstrates that the "hire American" provisions were extremely timely.

As provided by the Amendment, the Coast Guard was to have issued implementing regulations within six months of the date of enactment (September 18, 1978). To date, the Coast Guard has failed to act, thus seriously disadvantaging U.S. workers seeking employment on the OCS.

The SIU would therefore like to request the opportunity to submit a more detailed statement on this problem at a future date. It is precisely for this reason that we believe it necessary to extend the life of the Select Committee on the OCS.

In addition to the aforementioned, the SIU would like to bring to the Committee's attention several other areas which illustrate the need for continued oversight action.

1. Immigration Laws - Despite recent rulings extending U.S. tariffs and other laws to the OCS, the Immigration Service has ruled that the OCS is outside U.S. immigration laws. In a letter to the Immigration Service dated April 20, 1977, the SIU challenged this blanket exclusion.

We have yet to receive any response from the Immigration Service. In the meantime, foreign workers continue to deprive Americans of employment opportunities on the OCS.

We believe that a review of this area is urgently needed.

2. OCS Safety - Recently two Americans from Rhode Island fell to their deaths while performing repair work on a foreign rig anchored near the shore. Neither the Coast Guard nor the Occupational Safety and Health Administration took effective action until concerned local unions intervened.

American citizens employed on foreign rigs working on the OCS remain in a state of limbo when it comes to Federal safety laws. The 1978 Amendments have not solved the job safety problems on the OCS. Further action is needed.

3. Foreign OCS Equipment - New types of foreign OCS equipment continue to appear in the U.S. OCS. Already foreign flag and crewed anchor handling tugs, heavy lift ships and crane vessels are at work off our shore.

The British Embassy has asked that these and other types of equipment such as pipelaying barges, be omitted from U.S. OCS manning laws. We believe such omission, if written into the Coast Guard regulations will abrogate Section 30 of the law.

We hope the Committee will work to ensure that the regulations exclude from the OCS this type of foreign equipment and their foreign crews.

As the accompanying articles indicate, foreign nations seeking to enter U.S. offshore markets are, at the same time, closing off their own offshore areas. Foreign laws, policies and practices limiting OCS activity to their own equipment and workers continue to proliferate. Australia's recent action blocking a U.S. vessel and crew from entering the Australian OCS is only the latest example.

As often happens, passage of a law does not, by itself, produce the desired results. There remains much to be done if the purposes of the Outer Continental Shelf Lands Act Amendments of 1978 are to be fulfilled. It is therefore essential that the Committee, with its expertise and experience, continue its present oversight responsibilities.

Sincerely,



Charles Mollard
Vice President

NORWAY

An offshore oil power goes for the big time

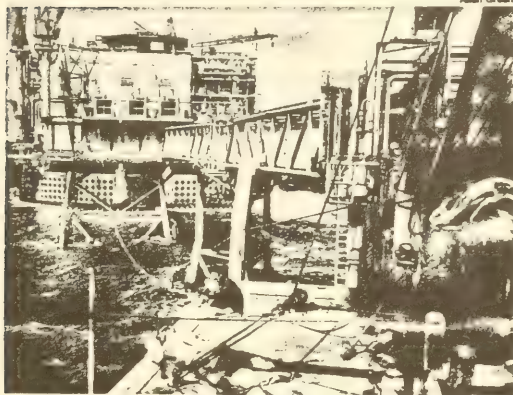
Wherever its maritime tradition and oil mix, Norway has a strong card. It already runs the largest fleet of supply boats in the North Sea, ranks third worldwide as a producer and operator of drilling rigs, and is first in building deepwater concrete structures. Now the

The Kongsberg Vapenfabrikk's Albartross, a dynamic positioning system for oil rigs, which draws heavily on the company's weapons-control technology, has chalked up \$14 million in sales since its introduction this year.

Invisible product. Banker Lars Uno Thulin of Den Norskecreditbank, in Oslo, has been urging that the industry also export a key "invisible product"—consultancy services. Det Norske Veritas, best known as a ship-classification society, has 243 survey stations around the world ideally suited for inspection and control of offshore structures.

For the Norwegian offshore supply industry to enter the big time and keep its technological edge, it must broaden this international business. There is also a political aspect to consider. Oil and the offshore industries now employ about 30,000 workers, but the government estimates that over the long term there will be steady work for only 24,000 if the industry remains confined principally to the North Sea. Employment is about to drop as construction peaks at Statfjord and Ekofisk. A top priority for the ruling Labor Party is expansion of the industrial

base with the oil money. Meanwhile, says Johan Melander, president of Den Norskecreditbank: "The Norwegian offshore industry will have to learn to compete internationally." Experts agree, but they warn that the going will be rough for some segments of the industry. And they question whether the government's hard-sell policy to the captive North Sea operators affords the best training. ■



Offshore equipment and related services made up 10%, or \$3.5 billion, of Norway's GNP last year.

Norwegian offshore industry is trying to get into the really big time. The government is stepping up the pressure: In the upcoming fourth round for the granting of North Sea concessions, it will favor applicants who generate the most work in Norway. The immediate hope is to attract 70% of total spending on projects now on the drawing boards.

The production of oil and gas, and their related industries, are expected to account for 20% of Norway's gross national product this year. Offshore equipment and services alone were 10% of last year's GNP, or \$3.5 billion.

Beyond the push to supply more of North Sea production needs, Norway is taking its sales pitch worldwide. It is selling supply-boat and crane-barge services throughout Latin America; a Fred Olsen Inc. rig was recently sold to the Chinese, and another is under charter to the Russians for test drilling off the island of Sakhalin; and Geco, a seismic outfit, has contracts from the Barents Sea to the African coast and Vietnam.

Seatrade, January, 1979

Manning troubles delay rig

By our Sydney correspondent
Esso-AHF was set to begin drilling in the deep water of the Exmouth Plateau this month. The dynamic positioning rig Sedco 472 was due at Fremantle from the Caribbean on January 9, but the Merchant Service Guild (MSG) gave the blunt warning that if it was to be US crewed it would be a waste of time. It could stay at home or sail straight on, for there was no chance of it working off the Australian coast.

The hint was taken and Sedco 472 moved to the US Gulf. If Esso and MSG can solve their problems it will now reach Australia at the end of February or early March. Sedco 472 flies the US flag and under US law is required to have a national crew. Seamen of other nationalities can only be engaged if US crewmen are not available.

Talks between Esso and maritime unions at Perth apparently found that there is a shortage of US seamen which will allow Sedco 472 to take on Australians after it arrives in Australian waters. Numbers have not been spelled out but it is believed the MSG would be satisfied with a 50:50 arrangement. ACTU president Robert Hawke played his usual part in smoothing off rough edges at the talks which left the company optimistic that a manning agreement would be reached.

Sedco 472 is one of very few rigs in the world equipped to drill in the waters of up to 2 000 metres on the Exmouth Plateau. Oil industry sources say its highly sophisticated operation requires specialists in many tasks that, at least initially, would not be available in Australia.

Apart from being the first drilling away from the North-West Shelf Rankin Trend, the Plateau programme will be by far the deepest undertaken in Australian waters. Shell has previously drilled to 390 metres,

but Sedco 472 will be drilling to 900. Esso will import a large technical staff to coincide with the drilling, but under the long-term rig leasing contract Sedco hires all rig workers. The company was expected to put together a squad of 70 drilling hands to work with the Esso technical people, but until the manning issue has been resolved this has gone into the melting pot.

A Canadian-Australian group, headed by Hudebay Oil, will begin drilling on the Plateau later, but it plans to use the Australian drillship Southern Cross.

SUBJ: UNIONS THREATEN START OF DRILLING ON EXMOUTH PLATEAU

SUMMARY: THE WEST AUSTRALIAN (WA) SECRETARY OF THE MERCHANT SERVICE GUILD ANNOUNCED THAT THE GUILD WILL NOT PERMIT THE US REGISTERED DRILL SHIP, SEDCO 472, TO START DRILLING OPERATIONS ON THE EXMOUTH PLATEAU UNLESS IT DROPS ITS US REGISTRATION AND SIGNS ON AN AUSTRALIAN CREW. END SUMMARY.

1. THE WA SECRETARY OF THE MERCHANT SERVICE GUILD, T BORONOVSKIS, ANNOUNCED ON DEC 5 THAT THE UNION WILL NOT PERMIT THE DYNAMICALLY POSITIONED DRILL SHIP, SEDCO 472, TO START ITS OPERATIONS ON THE EXMOUTH PLATEAU AS SCHEDULED IN EARLY NEXT YEAR. THE GUILD SAID THAT UNLESS SEDCO DROPS THE VESSEL'S US REGISTRATION, A MOVE WHICH WILL ALLOW IT TO THEN SIGN ON AN AUSTRALIAN CREW, THEY WILL BAN IT, EFFECTIVELY STOPPING IT FROM OPERATING. SEDCO HAS OFFERED TO, IN ESSENCE, DOUBLE CREW THE SHIP WITH AN AUSTRALIAN "TRAINING" CREW IN ADDITION TO THE US CREW. BUT THE GUILD DECLARED THAT THEY WILL NOT ACCEPT SUCH A "SOP". THEY FEEL IT WOULD BE A DANGEROUS PRECEDENT FOR FUTURE DRILLING OPERATIONS. 472 IS CURRENTLY ON LONG TERM LEASE TO EXXON AND IS ENROUTE TO WA FROM THE CARIBBEAN. WHILE IT CAN BE USED TO DRILL ELSEWHERE IT IS ONE OF THE VERY FEW RIGS IN THE WORLD CAPABLE OF DRILLING IN THE DEEP WATERS OF THE EXMOUTH PLATEAU. THE ISSUE IS FURTHER COMPLICATED BY THE FACT THAT PHILLIPS PETROLEUM WILL BE BRINGING A SISTER SHIP, SEDCO 471, TO THE PLATEAU IN MID 1979. IN CONTRAST TO THE 472 THE 471 IS OF LIBERIAN REGISTRY AND WILL BE CREWED BY AUSTRALIANS.

2. THE ACTION BY THE UNION HAS DRAWN IMMEDIATE AND STRONG REACTIONS FROM THE WA GOVERNMENT AND THE WA CONFEDERATION OF INDUSTRY. ANDREW MENSAROS, MINISTER FOR INDUSTRIAL DEVELOPMENT AND LESLIE HYLAND, PRESIDENT OF THE CONFEDERATION HAVE BOTH ISSUED STATEMENTS CONDEMNING THE GUILD ACTION. MENSAROS IN PARTICULAR POINTED OUT THAT THE GUILD ACTION OVER A HANDFUL OF JOBS WAS VERY SHORT SIGHTED IN THAT A SIGNIFICANT DISCOVERY OF PETROLEUM WOULD MEAN THE CREATION OF THOUSANDS OF JOBS FOR AUSTRALIAN WORKERS.

COMMENT: THE ISSUE IS ONE THAT MUST BE SETTLED BETWEEN SEDCO AND THE GUILD AND WE UNDERSTAND THAT NEGOTIATIONS ARE UNDERWAY IN MELBOURNE TO TRY AND WORK OUT A COMPROMISE PLAN. THE PROBLEM IS THAT WITH DAILY COST FOR THE 472 IN THE VICINITY OF USDOLS 120,000 PER DAY SEDCO AND ESSO CANNOT AFFORD TO LET IT STAY IDLE FOR LONG. IF THE UNIONS PERSIST IN THEIR DEMANDS IT COULD MEAN A SERIOUS DELAY IN THE COMPANY'S PLANS FOR EXPLOATION OF THE PLATEAU.

CARBONE

UNCLASSIFIED Department of State

INCOMING TELEGRAM

PAGE 01
ACTION EA-12

PERTH 00005 050225Z

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INFO OCT-01 ISO-00 EB-08 COME-00 TRSE-00 DOE-15 SOE-02
CIAE-00 INR-10 NSAE-00 L-03 PA-02 ICA-20 SIL-01
LAB-04 XMB-04 H-02 /084 W

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R 050127Z JAN 79
FM AMCONSUL PERTH
TO SECSTATE WASHDC 1474
AMEMBASSY CANBERRA
INFO AMCONSUL BRISBANE
AMCONSUL MELBOURNE
AMCONSUL SYDNEY

UNCLAS PERTH 0005

DEPT PLEASE PASS USDOC AND EXIMBANK

E. O. 12065: N/A
TAGS: ELAB, ENRG, AS
SUBJ: UNIONS THREATEN START OF DRILLING ON EXMOUTH PLATEAU

REF: 78 PERTH 576, 78 CANBERRA 10243, 78 STATE 320372

1. RATHER THAN PERMIT THE SEDCO 472 TO ARRIVE IN AUSTRALIAN WATERS WITHOUT A SOLUTION TO PROBLEMS WITH THE MERCHANT SERVICE GUILD, EXXON, PARENT COMPANY OF ESSO, HAS ELECTED TO UTILIZE THE RIG IN THE GULF OF MEXICO. THIS WILL MEAN A DELAY OF AT LEAST 60 DAYS IN ARRIVAL TIME AT THE EXMOUTH PLATEAU. CONSIDERING TRAVEL TIME REQUIRED TO REACH AUSTRALIA PLUS THE TIME REQUIRED TO COMPLETE AT LEAST ONE WELL IN THE GULF IT IS EXPECTED THAT THE 472 WILL NOT BE ABLE TO START DRILLING ON THE EXMOUTH PLATEAU BEFORE MAY OR JUNE.

2. WE HAVE LEARNED FROM KNOWLEDGEABLE LOCAL SOURCES THAT THERE IS NO QUESTION OF SEDCO CHANGING THE FLAG OF THE 472. THEY ARE INSTEAD CONTINUING TO MEET WITH THE GUILD IN AN ATTEMPT TO SOLVE THE PROBLEMS THROUGH NEGOTIATION. IT IS OUR UNDERSTANDING THAT A COMPROMISE HAS BEEN TENTATIVELY REACHED ON THE MANNING OF THE VESSEL WITH SEDCO AGREEING, IN ESSENCE, TO DOUBLE-CREW THE VESSEL BUT THAT QUESTIONS REMAIN ON WAGES AND ACCOMMODATIONS FOR THE AUSTRALIAN "CREW". A SECOND MEETING HAS BEEN SCHEDULED FOR MELBOURNE THIS MONTH DURING WHICH IT IS HOPED SOLUTIONS TO THOSE TWO PROBLEMS CAN BE HAMMERED OUT.
CARBONE

American Petroleum Institute

2101 L Street, Northwest
Washington, D.C. 20037
(202) 457-7300



Charles J. DiBona
President

March 28, 1979

Honorable John M. Murphy
House of Representatives
Ad Hoc Select Committee on
Outer Continental Shelf
Washington, D. C. 20515

Dear Mr. Chairman:

The American Petroleum Institute is pleased to offer the following written comments in conjunction with your Committee's recent oversight hearings on Public Law 95-372, the "OCS Lands Act Amendments of 1978." These comments will call the Committee's attention to some of the experiences we have had to date with respect to regulations proposed by the Department of the Interior to implement the Act.

In cooperation with industry personnel who have considerable expertise in OCS exploration, development, production, and transportation activities, the API is reviewing carefully each proposed regulation as it is published and has submitted to the Department a series of carefully considered comments and recommendations. Our purpose in this undertaking is to cooperate with the Department in the hope that the final regulations will accurately and fairly implement the policies and purposes of P. L. 95-372 -- especially those policies and purposes which are intended to facilitate and expedite the development of badly-needed petroleum resources of the OCS while at the same time providing maximum protection to environmental resources.

We feel certain that your Committee, as it exercises its continuing oversight responsibilities in this area, shares our hope that this objective will be achieved. With that in mind, there is attached to this letter, for the consideration of the members of the Committee and its staff, copies of our comments and recommendations which we have so far filed with the Department of the Interior. We request that these documents be made part of the record of your oversight hearings.

In addition to some major and specific problems, as highlighted below, we have found that most of the regulations so far proposed have been unnecessarily burdensome and complex and would thus serve to delay and impede OCS petroleum resource development in contradiction to the intent of P. L. 95-372.

As you will see from our comments, the API takes strong exception to the Department's determination that some of the proposed regulations do not constitute "significant rules" within the meaning of Executive Order 12044 and 43 CFR Part 14 and that, therefore, no regulatory analysis of the proposed regulations will be undertaken.

We have urged the Department to reverse this determination and to undertake the required regulatory analysis, because these proposed new rules, or revisions of existing rules, would have a significant adverse economic impact upon our industry and thus on the economy as a whole and would impose major and unnecessary new record-keeping and reporting requirements upon the petroleum industry. In taking this position, we are cognizant of the pervasive feeling in the public sector, the Congress and the Executive Branch that the regulatory aspect of our Federal government has become oppressive and counter-productive to the public interest.

In addition to the above concerns, we have found several instances in which the Department has proposed regulations which we believe are contrary to specific provisions of P. L. 95-372. These points are explained in some detail in the attached documents, but we would like to mention some of them briefly here, as follows:

1. The Department's proposed revision of 30 CFR Part 250.34 would impose arbitrary and unrealistic deadlines for the filing of exploration plans by lessees. There is no statutory authority for this provision.

2. The proposed revision of 30 CFR Part 250.34 is in direct conflict with Section 25 (a) of the Act, which exempts all leases in the Western Gulf of Mexico, as well as certain other leases, from that section's provisions regarding development and production plans.

3. The Department's proposed revision of 30 CFR Part 251 would permit, for the first time, the drilling of pre-lease, on-structure deep stratigraphic tests. This provision also lacks statutory authority. (See statement of L. C. Soileau, III, in behalf of the API at public hearings on March 5, 1979; our formal comments will be filed on or before April 10.)

4. The Department's proposed revision of 30 CFR Part 252 would violate Section 26 of the Act which provides that designated state officials may inspect (but not actually receive) a lessee's proprietary and confidential data; moreover, such inspection may occur only after a lease sale.

The enclosed comments also describe other lesser, but still important, instances in which the proposed regulations rely on shaky legal authority.

As was stated in the API's testimony during the first oversight hearings last December, the petroleum industry is anxious to be helpful as your Committee continues its careful examination of the many steps required to implement P. L. 95-372. We urge you to call on us for any other contributions you think we might be able to make.

Sincerely,



Enclosures

(Comments on 30 CFR 250.34

Comments on 30 CFR 252

Statement by L. C. Soileau, III

Comments on Oil Spill Pollution Fund)

American Petroleum Institute
2101 L Street Northwest
Washington, D.C. 20037
202-457-7330



C. T. Sawyer
Vice President

March 15, 1979

Chief, Conservation Division
U. S. Geological Survey
National Center, Mail Stop 600
Reston, Virginia 22092

RE: Notice of Proposed Rule Making, 30 CFR Part 252;
OCS Information Program

Dear Sir:

The American Petroleum Institute submits the attached comments and recommendations in response to the above Notice (44 FR 3524-3527, January 17, 1979).

I am authorized to advise you that these comments and recommendations are also endorsed and co-sponsored by the Western Oil and Gas Association.

Both the API and WOGA presented oral testimony about the proposed revision of 30 CFR Part 252 during the recent public hearings on this matter and the attached comments and recommendations are intended to refine and expand on that testimony.

Please be assured that both the API and WOGA, as well as the member companies of these organizations, are anxious to cooperate with your agency in the development of regulations which will accurately and fairly implement the policies and purposes of the recently-amended Outer Continental Shelf Lands Act -- i.e., to facilitate and expedite development of the petroleum resources of the OCS while at the same time providing maximum protection to environmental resources.

To that end, we would welcome any opportunity to discuss these proposed regulations, and our comments and recommendations about them, with you or your staff at any time.

Sincerely,

Attachment

DISTRIBUTION LIST

General Committee of Exploration Affairs
General Committee of Production
Drafting Team for 250 and 252 Proposals
Offshore Operators Committee
Western Oil and Gas Association
K. Boyd
R. Carlson
R. O'Rourke
S. Potter
S. Ritchie
F. Rogers
C. Sandler
J. Ware

COMMENTS AND RECOMMENDATIONS BY THE AMERICAN PETROLEUM
INSTITUTE AND THE WESTERN OIL AND GAS ASSOCIATION RE
PROPOSED REVISION OF 30 CFR PART 252, OCS OIL AND GAS
INFORMATION PROGRAM (44 FR 3524-3527, JAN. 17, 1979.)

§ Part 252.3 Oil and gas data and information to be
provided for use in the OCS oil and gas information program.

For the reasons stated below, we urge that paragraph (c)
of this Part be revised to read as follows:

"(c) Data or information requested by the Director shall
be provided as soon as practicable, but no longer than would
ordinarily be required to process and deliver such data."

The 30-day time limit in the proposed language would in
most instances be impossible to meet, for several reasons.
First, some of the specialized processing which must be used
often cannot be completed for as long as a year; there is often
a 45- to 60-day backlog in data processing firms; permittees
or licensees who do their own data processing will also have
great difficulty meeting the 30-day requirement on many
occasions without significantly disrupting work in progress--
work which might, incidentally, be necessary to required "due
diligence" activities.

§ Part 252.4 Summary report to affected States.

Paragraph (a) says that information in the Summary Report
shall be designed to assist the States "in planning for the
nearshore and onshore impacts..." Section 26 (b) (2) of the
Act says, however, that the Summary of data shall be designed

to assist the States "in planning for the onshore impacts of oil and gas development." Thus, to be in conformance with the Act, the word "nearshore" must be stricken from paragraphs (a) and (a) (4).

Paragraph (a) also provides that the Director shall consult with "affected States and other interested parties to define the nature, scope, content and timing of the Summary Report." We believe that permittees and lessees should be specifically included in this consultation process. This can be done by inserting, after the word "parties" in the above phrase, the words "including permittees and lessees."

Paragraph (a) should also be revised to implement the language in Section 26 (d) (1) (b) (ii) of the Act which permits the Secretary to withhold data which, if disclosed, would unduly damage the competitive position of the lessee or permittee who provided the Secretary with such information. This can be done by revising the penultimate sentence in paragraph (a) to read as follows:

"The Summary Report shall not contain data or information which the Director determines is exempt from disclosure in accordance with § 252.6 of this Part nor any data which, as determined by the Secretary, would, if disclosed, unduly damage the competitive position of the lessee or permittee who provided the Secretary with the information which the Secretary had processed, analyzed or interpreted." (New language underscored.)

§ 252.5 Information to be made available to affected States.

1. This section should also be revised to conform with the provisions of Section 26 (d) (1) (B) (ii) of the Act. [See comments on 252.4 (a) above.] This can be done by revising the final sentence to read as follows:

"The Director shall not make available any information which the Director determines is exempt from disclosure in accordance with § 252.6 of this Part, nor any data which, as determined by the Secretary, would, if disclosed, unduly damage the competitive position of the lessee or permittee who provided the Secretary with the information which the Secretary had processed, analyzed or interpreted." (New language underscored.)

§ 252.7 Privileged and proprietary data and information to be made available to affected States.

We believe that the proposed paragraphs (a) (1) (i) and (ii) must be stricken because they are in conflict with the provisions of Section 26 (d) (2) of the Act. That section provides that designated state officials may inspect privileged information after a lease sale. Paragraphs (a) (1) (i) and (ii) of the proposed revision would, without statutory authority, permit state officials to actually receive privileged or proprietary data "prior to the sale of a lease covering the area in which such activity was conducted."

Paragraph (a) (3) should be revised by deleting the reference to "transmitting any privileged or proprietary data or information to any State."

Except on paragraph (a) (iii), this language in Part 252.7 apparently is intended to implement Section 8 (g) of the Act, which requires the Secretary, when he is considering the possible leasing of lands within three miles of a State's seaward boundaries, to give the governor of that State certain information. We believe, however, that the language in Section 26 (d) (2) must be read as prohibiting the actual delivery of privileged information to a State official either prior to or after the sale of a lease.

We suggest that any regulations which may be necessary to implement Section 8 (g) should be incorporated into either 43 CFR Part 3300 or 30 CFR Part 250 since this provision relates to the leasing process and does not relate to the OCS oil and gas information program.

American Petroleum Institute
2101 L Street Northwest
Washington, D.C. 20037
202-457-7330



C. T. Sawyer
Vice President

March 15, 1979

Chief, Conservation Division
United States Geological Survey
National Center, Mail Stop 600
Reston, Virginia 22092

RE: Notice of Proposed Rule Making, 30 CFR 250.34;
Exploration, Development and Production Plans

Dear Sir:

The American Petroleum Institute submits the attached comments and recommendations in response to the above Notice (44 FR 3513-3524, January 17, 1979).

I am authorized to advise you that these comments and recommendations are also endorsed and co-sponsored by the Western Oil and Gas Association. Both the API and WOGA presented oral testimony about the proposed revision of 30 CFR 250.34 during the recent public hearings on this matter; the attached comments and recommendations are intended to refine and expand on that testimony.

Please be assured that both the API and WOGA, as well as the member companies of these organizations, are anxious to cooperate with you in the development of regulations which will accurately and fairly implement the policies and purposes of the recently amended Outer Continental Shelf Lands Act--i.e., to facilitate and expedite development of the petroleum resources of the OCS while at the same time providing maximum protection to environmental resources.

To that end, we would welcome any opportunity to discuss these proposed regulations, and our comments and recommendations about them, with you or your staff at any time.

Sincerely,

Attachment

DISTRIBUTION LIST

General Committee of Exploration Affairs
General Committee of Production
Drafting Team for 250 and 252 Proposals
Offshore Operators Committee
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F. Rogers
C. Sandler
J. Ware

COMMENTS AND RECOMMENDATIONS BY
THE AMERICAN PETROLEUM INSTITUTE AND
THE WESTERN OIL AND GAS ASSOCIATION
RE PROPOSED REVISION OF 30 CFR 250.34,
(FR 44-3513-3524, JANUARY 17, 1979.)

I. "SIGNIFICANT RULE" AND REGULATORY ANALYSIS:

The Supplemental Information portion of the Notice states that the Department of the Interior has determined that the proposed rule making is "not a significant rule and does not require a regulatory analysis under Executive Order 12044 and 43 CFR Part 14." We believe that this determination is incorrect and that the proposed revision of 30 CFR 250.34 is, in fact, a "significant rule" under the criteria set forth in 43 CFR Part 14 and that, therefore, a regulatory analysis must be prepared.

One of those criteria (Part 14.3) is that a "significant rule" is one which "imposes major new record-keeping or reporting requirements on...businesses..." Another measure of a "significant rule" under this Part is whether it would have "a substantial economic impact on the entire economy, or on an individual industry."

Both of these criteria are clearly applicable here.

Still another criteria in 43 CFR Part 14 is that a rule is "significant" if it imposes an annual economic burden of \$100 million or more on the economy or an individual region, industry or level of government. We believe it is proveable that the proposed revision of 30 CFR 250.34 will have an annual impact in excess of that amount on the petroleum industry, the economy and the consumer.

The economic burdens placed on the petroleum industry by these regulations will come from several directions:

1. Massive company manpower and outside consultant expenses will be incurred in the preparation of the detailed exploration plans and development and production plans, environmental reports, and supporting information for consistency certifications.
2. Failure to obtain agency approval of an exploration plan or a development and production plan could result in loss of the lease with or without compensation, depending on the reason plan approval was denied. Loss of one lease could represent a potential loss in excess of \$100 million.
3. Procedural delays in approval of a plan of development and production would result in substantial inflationary losses in construction and equipment costs, plus loss of present worth of delayed production. In the cumulative, this impact could exceed \$100 million per year.
4. The proposed requirement that lessees submit exploration plans within specified time periods could result in the drilling of unnecessary wells; this proposal would often confront the lessee with the untenable choice of drilling wells which could not be supported at that particular point in time or forfeiting the lease. In either situation, the economic impact to the industry and, ultimately to the consumer, would be substantial.
5. Proposed new requirements which would make some proprietary and confidential data available to the States introduces

a potential for unauthorized, whether intentional or unintentional, disclosure of information that would cause a serious economic loss to the operator who has been required to supply such information to the Director.

For these reasons, we urge the Department to reverse its negative declaration and to prepare a regulatory analysis of the proposed revision of 30 CFR 250.34 as a means of assuring-- in keeping with the purpose of Executive Order 12044--that when promulgated these regulations will be as cost-effective as possible and will not impose unnecessary burdens on the regulated parties.

II. PART 250.34-1 EXPLORATION PLANS:

1. Paragraph (a) requires that exploration plans "shall identify, to the maximum extent possible, all the wells that the lessee proposes to drill... on the entire leased area."

The phrase "entire leased area" would seem to require that the lessee submit an exploration plan covering all of his leased area, which might include several non-contiguous blocks, in order to obtain approval to drill the initial well. Since information obtained in drilling the initial well largely controls the number and location of subsequent drilling operations, any specific identification of all wells in the exploration plan would be highly speculative and of questionable value.

Therefore, we suggest that the words "entire leased area" be changed to "area covered by the exploration plan."

2. Paragraph (a) (1) (vi) provides that an exploration plan shall include "such other relevant data as the Director may require."

Such "open-ended" language is not permitted by Section 11 (c) (3) of the Act, which says that an exploration plan "shall include, in the degree of detail which the Secretary may by regulation require...such other information deemed pertinent by the Secretary." This paragraph must, therefore, be deleted; any information which the Secretary wants to require must be specifically set forth by these regulations.

3. Paragraph (a) (3) provides that the Director may require an exploration plan to be accompanied by a general statement of development and production intentions.

Under Section 11 (c) (4) of the Act, this general statement may be required only by specific regulations; if the Secretary intends to require such statements they must be provided for in specific requirements in these regulations.

4. Paragraph (a) (2) (ii) exempts lessees in "the Gulf of Mexico, except in that area adjacent to the State of Florida" from the requirement to submit Environmental Reports.

In the interest of clarity and specificity, we suggest that this phrase be changed to read "those Outer Continental Shelf tracts contiguous to the seaward boundary of the State of Florida."

5. Paragraphs (a) (4) (i) and (ii) would impose deadlines for the filing of exploration plans.

Such provisions, if promulgated, would stretch these regulations beyond what is required or permitted under Section 11 (c) of the Act. Section 11 (c) clearly does not require a lessee to submit an exploration plan; it merely provides that exploration

activities cannot be commenced until a plan is submitted and approved. It says nothing as to when such a plan must be submitted.

Despite the language in Section 11 (c), however, subparagraph (i) would require that exploration plans as to leases issued prior to the effective date of these regulations be filed within 90 days following the first lease anniversary date subsequent to that effective date or before the end of the second lease year, whichever is later. This would amount to a unilateral abrogation of the terms of such leases and a denial of due process.

Leases purchased before these proposed regulations become effective carry with them the right to explore, but they impose no obligation on the lessee ever to do so. The terms of those leases do not require the filing of exploration plans within any specific time frame--or ever, for that matter.

Subparagraph (ii) is equally impermissible under Section 11 (c) of the Act. That section neither requires nor permits the promulgation of regulations mandating the submission of exploration plans within two years after the effective date of these regulations.

While the Secretary may be compelled by Section 5 (a) (7) to issue general regulations "for the prompt and efficient exploration...of a lease area," we believe that Section 11 (c) does not permit him to tie leases to the specific time frames proposed in subparagraphs (i) and (ii).

The Act's requirement, it must be noted, is for "prompt and efficient" exploration. It clearly would not be in the interests of efficiency to require the premature filing of exploration plans.

In any event, in addition to being unauthorized under the Act, such specific requirements are clearly not necessary to assure that exploration will go forward as diligently and efficiently as conditions permit. This is so because every lessee is under significant statutory and economic constraints in this regard.

In addition to the fact that he faces the loss of his lease if he has not proceeded to exploration before the end of the five-year term, the lessee must also remember the "due diligence" provision of Section 8 (d) of the Act. This language says that a lessee who is found not to be meeting diligence requirements on other leases may not bid for new leases.

Since each lease represents a significant investment--in the form of bonus money, rentals and pre- and post-lease evaluation costs--economic considerations alone will generally assure a diligent effort to recoup financially. The lessee must be left free, however, to explore in accordance with his own priorities.

Five years are a minimum for effective, efficient and economical exploration in a normal environment. In areas of deeper water and adverse weather conditions--such as the Bering Sea--the minimum period for economic and efficient

exploration of a lease may well be at least 10 years. The Congress has wisely recognized this fact by allowing for primary lease terms of 10 years in such areas.

The most promising tracts, which earn the highest bids, will always be explored as rapidly as possible. Those tracts which represent lower quality exploration prospects will most often be scheduled for more intensive geophysical and geological review before actual drilling can be programmed; results and information developed in drilling the more promising prospects will contribute significantly to the process of evaluating the less promising tracts.

It is clear that this proposal to establish an arbitrary exploration time table would--if it is incorporated into the final regulations--greatly lower the quality of the exploration effort. In short, we believe more oil and gas will be discovered in the long term if lease operators are permitted to program their exploration activities in an orderly and efficient manner.

6. Paragraphs (b) (1) and (2) require the lessee to provide the Director with enough copies of his exploration plans for distribution to the governors of affected states, etc., and require the Director to provide these copies to governors and State Coastal Zone Management agencies.

To assure consistency with applicable CZMA regulations, language should be added here noting that 15 CFR 930.76 requires that a consistency certification must accompany each exploration plan and that the lessee must also provide a copy of the plan and the consistency certification to the designated State CZM agency.

These paragraphs as they now read could leave a lessee with the erroneous impression that he has complied with this part of the CZMA "Federal consistency" procedures by merely filing the required documents with the Director.

In connection with paragraph (b) (1) we call your attention to the fact that current regulations of the California Coastal Commission require submission of a description of proposed exploration (as well as development and production) activities to that agency 30 days before a plan is submitted to the Director. It seems to us there is no point in having the CCC review such activities before a plan has been reviewed by the Director and "deemed submitted." To do so would simply result in continued restudy by the State agency of modifications and additions made to the plan at the request of the Director.

We urge you to inquire of the Office of Coastal Zone Management as to whether the CCC can properly impose such a requirement.

7. Paragraph (b) (4) provides that if the governor of a State with an approved CZM program determines that activities described in an exploration plan will have no significant impact on that state's coastal zone, then "the lessee and the Director should be notified of that determination at the earliest possible moment."

This language is dangerous because it appears to substitute an informal determination and notification process for what is required under CZMA "Federal consistency" regulations. Under those regulations, no Federal license or permit required for an exploration plan can be issued until (1) the designated State

CZM agency has concurred in the consistency certification for that plan or (2) its concurrence has been conclusively presumed or (3) the Secretary of Commerce overrides any State agency objection to the consistency certification.

The central problem with Paragraph (b) (4) as it now reads is that a mere "notice" by the governor that he finds an exploration plan will have no significant impact on the coastal zone would be meaningless and confusing. The procedures required under 15 CFR Subpart E must also be followed unless (b) (4) is to be read as superceding those regulations. Therefore, we recommend that Paragraph (b) (4) be deleted or revised so as to conform with the CZMA regulations, specifically 15 CFR 930.79.

8. Paragraphs (e) (2) (i) and (g) permit the Director to grant "conditional" approval of exploration plans. These provisions are contrary to the Act and are unnecessary as well.

Section 11 (c) (1) of the Act does not permit conditional approval of a plan, even when an affected state has not "signed off" on a consistency certification; the Secretary (Director) must, under this subsection, approve a plan as submitted or modified within 30 days unless he finds it nonapprovable for reasons not related to CZM consistency.

Moreover, such "conditional approval" authority is clearly not necessary or useful. If the Director approves a plan within 30 days, as the Act requires, no damage is done to the rights of any State which is considering a consistency

certification for a plan. This is so because both OCSLA and CZMA provide that no Federal license or permit to be used under an exploration plan can be issued until (1) the State CZM agency concurs in the consistency certification, or (2) its concurrence is conclusively presumed or (3) the Secretary of Commerce overrides an objection by a State to a consistency certification.

Thus, we recommend that the words "either finally or conditionally" be stricken from paragraph (e) (2) (i).

We also recommend that paragraph (g) be deleted as impermissive under the Act, for the reasons noted above. Also, this language is seriously flawed in that it says "final approval" may come only after a State concurs with or is conclusively presumed to concur with a consistency certification. This ignores the provision in both OCSLA and CZMA which permits the Secretary of Commerce to override a State agency's objection to a consistency certification. Clearly, a plan may also be approved when this override authority is exercised.

Both CZMA and OCSLA require approval of a plan without regard to the status of its CZM consistency certification; if certification is not achieved, the plan is not operable because the required licenses and permits cannot be issued.

9. Paragraph (k) would require the Director to periodically review approved exploration plans and to base his review upon the significance of any changes "in available information and in other onshore or off-shore conditions affected or impacted by exploration activities." Plan revisions required by such review are to go through the same process which applies to new plans.

We find nothing in the Act which authorizes such a continuing review of plans after they have been approved. although the Secretary is, of course, authorized to require modifications of plans before they are approved.

If it is felt that the Secretary has general authority and responsibility to monitor operations under a plan, his authority to require revisions of approved plans should be limited to those situations described in Section 5 (a) (1).

Moreover, we believe it is inappropriate to require that changes in "onshore" conditions be considered here. It is difficult to perceive how OCS exploration activities could have a significant onshore impact in the first instance, much less contribute to a significant change in onshore impacts.

Unless paragraph (k) is deleted or modified lessees will be under a cloud of constant uncertainty and will be unable to conduct exploratory activity efficiently.

10. Paragraph (m) permits the Director to authorize or direct the lessee to conduct geological or geophysical surveys which he feels may be necessary to evaluate activities under an exploration plan.

This provision should be stricken because it is not provided for in the statute. While the Secretary has broad authority to provide for the prevention of waste and conservation of natural resources on the OCS, in delegating his authority through regulations it would seem mandatory that the rights of the lessee should be protected from possibly unreasonable impositions and requests that may occur where unfettered discretion is granted to an administrator. There are no guidelines or constraints imposed imposed on the Director in making his determination as to the informational requirements he may impose on the lessee.

This paragraph also requires the lessee to provide the Director, without cost, copies of any data obtained as the result of such surveys. This language should be deleted because it is directly contrary to the provisions of Section 26 (a) (1) (C) (ii) of the Act.

III. PART 250.34-2 DEVELOPMENT AND PRODUCTION PLANS

1. Paragraph (a) (1) provides that no development or production may be commenced on any lease issued in any area of the OCS until a development and production plan has been submitted to and approved by the Director.

This language clearly ignores the exceptions which are provided for in Section 25 (a) (1) of the Act, as well as the intent of the Congress as stated in the Conference Report:

"The Conference Report requires a plan to be submitted for all future leases except in the Gulf of Mexico."

"Thus the mandate and specific procedures of this bill that the Secretary of Interior must secure submission, and then review, approve or disapprove a development and production plan applies to new leases or existing leases where there has not yet been a discovery and does not apply to leases, old or new, in the Gulf of Mexico." (S. Rpt. 95-1091)

The same Report (at Page 115) also has this to say about what the Congress intended by the enactment of Section 25 (a):

"It is hoped that the Secretary of the Interior will apply existing law and requirements to tracts which have commenced development and production, and to other areas in the Gulf of Mexico, where development and production activities have been going on for a number of years, in such a manner as to limit bureaucratic redtape and otherwise minimize delays in the search for and production of oil and gas." (Emphasis supplied.)

Obviously, then, paragraph (a) (1) must be rewritten so that it conforms to the provisions of Section 25 (a) (1). We would remind you that the Congress enacted this provision as a direct result of the slowdown of development in the Gulf of Mexico which resulted from the revision of 30 CFR 250.34 as promulgated in January of 1978.

We understand that the authors of these proposed regulations are concerned that if development and production plans are not required for all OCS leases, it may not be possible for the Secretary to carry out his responsibilities under Section 19 of the Act. All we can say on that point is that where no development and production plan is required to be submitted, because of the exemptions provided in Section 25 (a), there simply will be no plan for an affected State governor to review and comment upon.

Concern has also been expressed that where no plan is filed, there will be no opportunity for a CZM consistency review and certification of a plan. This is, of course, correct, but it must be remembered that each Federal license and permit required for development and production activities will then be subject to the CZM consistency process. It may be that some companies owning leases which are exempt under Section 25 (a) (1) will choose to file plans voluntarily rather than follow the CZM procedure for each license and permit.

In the Summary of the Notice (44 FR 3515) the exemptions provided for in Section 25 (a) (1) are discussed as follows:

"For these exempt leases, it is not mandatory that the Secretary require the submission of development and production plans; however, the Secretary is not prohibited from doing so."

This is a totally erroneous misreading of what Section 25 (a) (1) says and what the Congress clearly intended by that language, as evidenced in the quoted excerpt from the Conference Report on S. 9.

Any failure of these proposed regulations to implement accurately the exemptions provided for in Section 25 (a) obviously will subject some lessees to unwarranted jeopardy because Section 25 (j) of the Act [and paragraph (1) of this part of the proposed regulations] provides that a lease for which a development and production plan is not filed is subject to cancellation.

It is pertinent and important to note here what is provided for in Section 25 (b) of the Act, which reads:

"(b) After the date of enactment of this section, no oil and gas lease may be issued pursuant to this Act in any region of the Outer Continental Shelf, other than the Gulf of Mexico, unless such lease requires that development and production activities be carried out in accordance with a plan which complies with the requirements of this section." (Emphasis supplied.)

Paragraph (a) (1), by proposing to prohibit development and production activities "in any area of the OCS" until a plan has been submitted and approved, is clearly contrary to that language as well as to the language in Section 25 (a).

2. Paragraph (a) (1) (iii) is far too specific in its requirements. While it is possible to predict tentative locations for each development well at an advance planning stage, it is highly probable that these will change as development proceeds. We suggest that this language be rewritten so as to read:

"(iii) The approximate location and number of developments wells and their tentative bottom hole locations."

3. Paragraphs (b) (1) and (2) require the lessee to provide the Director with sufficient copies of the plan for distribution to the governors of affected states and to State CZM agencies.

To assure consistency with applicable CZMA regulations, language should be added here noting that 15 CFR 930.76 requires that a consistency certification must accompany each development and production plan and that the lessee must also provide a copy of the plan and the consistency certification to the designated State CZM agency.

These paragraphs as they now read could leave a lessee with the erroneous impression that he has complied with this part of the CZMA "Federal consistency" procedures by merely filing the required documents with the Director.

In connection with paragraphs (b) (1) and (2) we also call your attention to the fact that current regulations of the California Coastal Commission require that a description of proposed development and production activities be submitted to that agency 30 days before a plan is submitted to the Director. It seems to us there is no point in having the CCC

review such activities before a plan has been reviewed by the Director and "deemed submitted." To do so would simply result in continued restudy by the State agency of modifications and additions made to the plan at the request of the Director.

We urge you to inquire of the Office of Coastal Zone Management as to whether the CCC can properly impose such a requirement.

4. Paragraph (c) (3) (i) says that if the governor of a State with an approved CZM program determines that activities described in a development and production plan will have no significant impact on that State's coastal zone, then "the lessee and the Director should be notified of that determination at the earliest possible moment."

This language is dangerous and confusing because it appears to substitute an informal determination and notification process for what is required under CZMA "Federal consistency" regulations. Under those regulations, no Federal license or permit required for a development and production plan can be issued until (1) the designated State CZM agency has concurred in the consistency certification for that plan, or (2) its concurrence has been conclusively presumed or (3) the Secretary of Commerce overrides any State agency objection to the consistency determination.

The central problem with Paragraph (c) (3) as it now reads is that a mere "notice" by the governor that he finds a development and exploration plan will have no significant impact on the coastal zone would be meaningless and confusing. The

procedures required under 15 CFR Subpart E must also be followed, unless (c) (3) is to be read as superceding those regulations.

Therefore, we recommend that Paragraph (c) (3) be either deleted or be revised so as to make it conform with the CZMA regulations, specifically 15 CFR 930.79.

5. Paragraph (g) (1) (iii) says that in the evaluation of a development and production plan the Director shall consider whether it is consistent with the Coastal Zone Management Act.

We recommend that this reference be deleted, since the authority to determine whether a plan is consistent with that Act clearly rests (under CZMA) with the States and the Secretary of Commerce. This paragraph as it now reads is a source of significant potential conflict: Suppose, for example, that the Director finds a plan is not consistent and the State or the Secretary of Commerce finds that it is. Who prevails?

6. Paragraph (g) (2) (iii) (A) is somewhat ambiguous and should be revised to insure that the "conclusive presumption" provision of CZMA is not overlooked.

This could be done by making the first part of the sentence read: "(A) State concurrence with the consistency certification has not been received, or the State's concurrence has not been conclusively presumed..." etc.

In any event, there is no need for the Director to disapprove a plan if CZM consistency is not achieved; the lack of consistency certification makes the plan inoperable because the licenses and permits needed for it cannot be issued.

7. Paragraph (i) (2) provides that if a plan is disapproved because a State objects to the consistency certification, the lessee may revise and re-submit the plan or he may appeal to the Secretary of Commerce to override the State's objections.

This section should also reference 15 CFR 930.83, which requires the lessee to submit a new or amended plan to the Secretary of the Interior if the Secretary of Commerce does not override the State's objections. Copies of the new or amended plan, and the consistency certification, must also be provided to the State CZM agency. [15 CFR 930.83 is in accordance with Section 307 (c) (3) (B) (ii) of CZMA.]

8. Paragraph (k) (2) provides that when the Director determines that a proposed revision to a plan "could result in a significant change in the impacts identified," such revisions shall be subject to the same approval procedures as apply to original plans.

We believe this language does not accurately conform to Section 25 (i) of the Act, which says in part:

"Any revision of an approved plan which the Secretary determines is significant..." shall be subject to the same review procedures as an original plan.

The intent of the Act clearly is to require the full-scale review and approval process only when significant revisions to the plan itself are proposed. Minor modifications (i.e., to adjust for technical or engineering needs) need not be subject to the original review process and paragraph (k) (2) should be rewritten to conform more closely with Section 25 (i).

9. Paragraph (l) provides that "whenever the lessee fails to submit a plan...the lease may be cancelled..." etc.

This language not only ignores the letter and intent of Section 25 (a) but the provision found in Section 25 (b) as well. That provision reads:

"(b) After the date of enactment of this section, no oil and gas lease may be issued pursuant to this Act in any region of the Outer Continental Shelf, other than the Gulf of Mexico, unless such lease requires that development and production activities be carried out in accordance with a plan which complies with the requirements of this section."
(Emphasis supplied.)

Since the Act clearly makes development and production plans a lease condition--except as to leases in the Gulf of Mexico--the language quoted above from paragraph (1) is superfluous. In any event, Section 25 (b) does not permit these regulations to speak of cancellation for future Gulf of Mexico leases for which no development and production plan is filed.

10. Paragraph (1) also provides that when a lessee "fails to comply with an approved plan...the lease may be cancelled."

This language conflicts with 15 CFR 930.86; this part of the "Federal consistency" regulations says, in summary, that the Secretary of Commerce is to determine when a lessee has failed to comply substantially with a plan and that if he makes such a finding the lessee shall submit a new or amended plan to the Secretary of the Interior. Pending approval of the new or amended plan under this procedure, the lessee is required to comply with the original plan or with interim orders issued jointly by the Secretary of Commerce and the U.S.G.S.

All of this raises the interesting possibility that a lessee accused of non-compliance might find himself concurrently defending against a cancellation attempt by the Secretary of the Interior and complying with the requirements of 15 CFR 930.86.

11. Paragraph (m) should be revised to incorporate the conclusive presumption and secretarial override provisions of CZMA.

This could be done by making the last sentence read:

"Pursuant to Section 307 (c) (3) (B) (iii) of the Coastal Zone Management Act of 1972, as amended, once the affected State has concurred in the consistency certification for a development and production plan, or its concurrence has been conclusively presumed, or the Secretary of Commerce has overridden any objection to any such consistency certification, subsequent permit applications for activities described in detail in the plan are not subject to State consistency review under the Coastal Zone Management Act of 1972, as amended (15 U.S.C. 1456)."
(New language underscored.)

12. Paragraph (n) authorizes the Director to direct the lessee to conduct geological or other surveys which he determines to be necessary for the valuation of activities to be carried out under an approved plan.

We recommend that this provision be deleted because there is no specific requirement or authorization for it in the statute.

This paragraph also requires the lessee to provide the Director, without cost to the lessor, copies of any data obtained as a result of such surveys. This conflicts directly with Section 26 (a) (1) (C) (i) and (ii) and the language must therefore be stricken.

IV. PART 250.34-3 ENVIRONMENTAL REPORT

1. Paragraph (a) requires, with some exceptions, that an Environmental Report accompany each exploration plan.

The problems we have encountered in this area relate not to the proposed regulations per se but to the "guidelines" which are being promulgated at the regional level.

For example, the Pacific Area U.S.G.S. Supervisor has currently promulgated guidelines for exploration ER's which are so extensive and onerous as to approach a full-blown EIS. In view of the fact that there has never been an oil spill in excess of 50 barrels from an exploratory well anywhere in the world, this seems to us to be an extreme case of regulatory overkill.

Our recommendations would be to bring the actual ER document more into focus with the regulations and to prepare regional guidelines, if such are needed at all, which concur with the intent of the law and regulations.

2. Paragraph (a) (2) provides that the ER/Exploration shall include "Such other data and information as the Director may require."

This "open-ended" language is not permitted under Section 25 (c) (6) of the Act, which says a plan must include "such other information as the Secretary may by regulation require." If other data and information are to be required as elements in the ER, other than those specified under paragraph (a) (1), they must be spelled out by these regulations.

3. Paragraph (b) would prescribe requirements for an ER/Development and Production which go so far beyond a simple "report" as to approach a full-scale EIS.

Although this language says that the ER "should include information available at the time of the plan's submission to the extent that such information is accurate, current and applicable to the geographic area covered by the...plan," the conclusion is inescapable that much more would be required, since this paragraph itemizes 30 specific subjects as to which detailed information is required.

Such a broad requirement obviously will lead to significant delays in the approval of development and production plans. We do not believe such stringent requirements are either necessary or desirable. In regions such as the Southern California and Cook Inlet offshore areas, which have experienced production for many years, the intense degree of detail, and redundant recitation of physical parameters already well-known and studied, simply results in voluminous and needless paper work which serves no good purpose.

We recommend that these regulations be revised so that requirements for ER's relating to development-production activities are tailored to fit the situation in specific areas.

4. Paragraph (b) (1) (F) (1) provides that the ER/Development-Production shall include "Cultural and historical resource surveys of the lease or unit area."

This provision should be deleted because such surveys have been proven to be non-productive and excessively costly.

Thirty-five OCS operators recently reported that they had made 676 such surveys--at a direct cost in excess of \$16 million--and found no reportable cultural or historical resources. Now is the time to exorcise this wasteful and meaningless requirement.

5. Paragraphs (b) (1) (i) (F) (8) and (9) require the ER/Development and Production to include information on "Other uses of the area" and "socioeconomic conditions."

These requirements are ambiguous and generally duplicative of other requirements in 250.34-3 (b) and should be deleted.

6. Paragraph (b) (1) (ii) requires an assessment of the affects on the environment which are expected to occur from implementation of the plan, for "each of the major elements of the environment (i.e., air, water, biota, etc.)."

The lack of specificity in this requirement would result in unnecessary delays since many operators will file reports which they deem to be complete but which will be rejected when the Director seeks additional specific information which is not plainly required under the proposed language.

7. Paragraph (b) (1) (iii) requires a discussion of alternatives that were considered during the development of a plan.

This proposal appears to be based on the provisions of NEPA, which are not applicable unless a plan is subject to an EIS. It should be deleted and the plan should be subject to approval or disapproval on its own merits.

8. Paragraph (b) (2) requires the ER/Development-Production to include "Such other data and information as the Director may require."

This "open-ended" language is not permitted under Section 25 (c) (6) of the Act, which says that a plan must include "such other information as the Secretary may by regulation require." Thus, any information required in an ER/Development-Production plan must be required in specific language in these regulations.

STATEMENT OF L. C. SOILEAU III
ON BEHALF OF THE AMERICAN PETROLEUM INSTITUTE

PUBLIC HEARINGS ON PROPOSED
REVISION OF 30 CFR PARTS 250.34 AND 252
(DEPARTMENT OF THE INTERIOR) MARCH 5, 1979,
DEPARTMENTAL AUDITORIUM, WASHINGTON, D.C.

THANK YOU, MR. CHAIRMAN. MY NAME IS L. C. SOILEAU III. I AM THE SENIOR VICE PRESIDENT, EXPLORATION, LAND & PRODUCTION, OF CHEVRON U.S.A., AND I AM TESTIFYING TODAY ON BEHALF OF THE AMERICAN PETROLEUM INSTITUTE.

THE AMERICAN PETROLEUM INSTITUTE APPRECIATES THE OPPORTUNITY TO PARTICIPATE IN THESE PUBLIC HEARINGS ON THE DEPARTMENT'S PROPOSED REVISIONS OF EXISTING REGULATIONS RELATING TO OCS EXPLORATION AND DEVELOPMENT AND PRODUCTION PLANS AND THE AVAILABILITY OF INFORMATION TO COASTAL STATES WHICH ARE AFFECTED BY OPERATIONS ON THE OCS.

WE APPLAUD THE DEPARTMENT'S DECISION TO ENCOURAGE WIDE PUBLIC PARTICIPATION IN THE RULEMAKING PROCESS BY MEANS OF HEARINGS SUCH AS THIS AND WE HOPE THAT THIS PRACTICE WILL BE CONTINUED AS OTHER REGULATIONS TO IMPLEMENT THE 1978 AMENDMENTS TO THE OCS LANDS ACT ARE CONSIDERED. THE MULTIPLICITY AND COMPLEXITY OF FEDERAL REGULATIONS PLACE A CONTINUING BURDEN ON ALL SEGMENTS OF OUR ECONOMY AND IT BEHOOVES BOTH THE GOVERNMENT AND THE PRIVATE SECTOR TO MAKE EVERY EFFORT TO SEE THAT SUCH REGULATIONS AS ARE REQUIRED BY LAW ARE NOT COUNTER-PRODUCTIVE TO THE NATIONAL INTEREST. PUBLIC HEARINGS SUCH AS THIS ONE CAN, WE BELIEVE, BE HELPFUL IN THAT REGARD AND WE

HOPE THAT OUR PARTICIPATION WILL MAKE A MEANINGFUL CONTRIBUTION TO THAT END.

OUR OBJECTIVE IS TO ASSIST YOU IN ANY WAY WE CAN IN THE DEVELOPMENT OF REGULATIONS WHICH WILL EXPEDITE AND FACILITATE THE DEVELOPMENT OF OUR OCS PETROLEUM RESOURCES. THE NATIONAL INTEREST, IN THIS PERIOD OF ENERGY CRISIS, REQUIRES THAT WE DO NO LESS.

IN MY STATEMENT TODAY, I WILL ONLY HIGHLIGHT SOME OF THE PRINCIPAL CONCERNS WE HAVE WITH THE PROPOSED REVISIONS. (30 CFR 250.34 AND 30 CFR 252). MORE DETAILED COMMENTS WILL BE PROVIDED IN A WRITTEN STATEMENT WHICH WILL BE FILED JOINTLY BY THE API AND THE WESTERN OIL AND GAS ASSOCIATION.

PROPOSED REVISION OF 30 CFR 250.34

OUR FIRST CONCERN IS THAT THE DEPARTMENT HAS ERRED IN DETERMINING THAT THIS PROPOSED REVISION IS NOT A "SIGNIFICANT RULE" AND THAT IT THEREFORE DOES NOT REQUIRE A REGULATORY ANALYSIS UNDER EXECUTIVE ORDER 12044 AND 43 CFR PART 14.

ONE OF THE CRITERIA (FOUND IN 43 CFR PART 14) IS THAT A "SIGNIFICANT RULE" IS ONE WHICH "IMPOSES MAJOR NEW RECORD-KEEPING OR REPORTING REQUIREMENTS ON...BUSINESS." ANOTHER IS THAT A "SIGNIFICANT RULE" IS ONE WHICH WOULD "HAVE A SUBSTANTIAL ECONOMIC

IMPACT ON...AN INDIVIDUAL INDUSTRY."

WE BELIEVE THAT BOTH CRITERIA ARE CLEARLY APPLICABLE AS TO THE PROPOSED REVISION (OF 30 CFR 250.34).

WE URGE THAT THE DEPARTMENT'S DECLARATION THAT THIS PROPOSED REVISION IS NOT A "SIGNIFICANT RULE" BE RECONSIDERED AND THAT A REGULATORY ANALYSIS WILL BE MADE PRIOR TO THE PROMULGATION OF THESE REGULATIONS. THIS, WE BELIEVE, WOULD BE IN KEEPING WITH THE SPIRIT AND THE PURPOSE OF EXECUTIVE ORDER 12044 WHICH, AS WE UNDERSTAND IT, IS INTENDED TO ENCOURAGE THE DEVELOPMENT OF REGULATIONS WHICH ARE AS COST EFFECTIVE AS POSSIBLE AND WHICH DO NOT IMPOSE UNNECESSARY BURDENS ON THE REGULATED PARTIES.

PART 250.34-1 - DEADLINES FOR EXPLORATION PLANS

OUR NEXT MAJOR CONCERN IS WITH THOSE PARTS OF THE PROPOSED REVISIONS WHICH WOULD IMPOSE DEADLINES FOR THE FILING OF EXPLORATION PLANS (I.E., PARAGRAPHS (a) (4) (i) AND (ii) OF PART 250.34-1).

WE FIND NOTHING IN SECTION 11 OR ANY OTHER SECTION OF THE AMENDED OCS LANDS ACT WHICH PERMITS SUCH A REQUIREMENT, AND WE URGE THAT THESE PARAGRAPHS BE DELETED.

SECTION 11 (c) (i) OF THE ACT PROVIDES ONLY THAT EXPLORATORY ACTIVITIES ON A LEASE MAY BE STARTED ONLY AFTER AN

EXPLORATION PLAN HAS BEEN SUBMITTED AND APPROVED. IT SAYS NOTHING AS TO WHEN SUCH A PLAN MUST BE FILED. THUS, THESE PARAGRAPHS [(a) (4) (i) AND (ii)] CLEARLY ARE NOT SANCTIONED BY THE ACT.

ONE PARAGRAPH [(a) (4) (i)] APPLIES TO LEASES ISSUED PRIOR TO THE EFFECTIVE DATE OF THE PROPOSED REGULATIONS. IT WOULD REQUIRE THE FILING OF AN EXPLORATION PLAN WITHIN 90 DAYS FOLLOWING THE FIRST ANNIVERSARY DATE AFTER THE EFFECTIVE DATE OF THE PROPOSED REGULATIONS, OR BEFORE THE END OF THE SECOND LEASE YEAR, WHICHEVER IS LATER.

THIS, WE BELIEVE, IMPROPERLY IMPOSES A REQUIREMENT ON THE LESSEE WHICH DID NOT EXIST AT THE TIME THE LEASE WAS PURCHASED - I.E., A LEASE ISSUED PRIOR TO THE EFFECTIVE DATE OF THESE REGULATIONS GIVES THE LESSEE A RIGHT TO EXPLORE IT AT WHATEVER PACE, OR UNDER WHATEVER TIMETABLE, HE DEEMS TO BE APPROPRIATE.

THIS PARAGRAPH [(a) (4) (i)] AMOUNTS TO A UNILATERAL POST-FACTO ALTERATION OF THE CONTRACT BETWEEN THE LESSOR AND THE LESSEE.

THE NEXT PARAGRAPH [(a) (4) (ii)] IS EQUALLY OBJECTIONABLE. THERE IS NO AUTHORITY IN SECTION 11(c) - OR IN ANY OTHER SECTION OF THE ACT - FOR A REQUIREMENT THAT, FOR LEASES ISSUED AFTER THE EFFECTIVE DATE OF THESE REGULATIONS, AN EXPLORATION PLAN BE SUBMITTED WITHIN TWO YEARS.

IT MUST BE REMEMBERED THAT EVEN WITHOUT THESE PROPOSED REGULATIONS EVERY LESSEE WILL BE AT ALL TIMES UNDER SEVERE STATUTORY AND ECONOMIC PRESSURES TO EXPLORE HIS LEASE PROMPTLY AND EFFICIENTLY.

SECTION 8(d) OF THE ACT, FOR EXAMPLE, PROVIDES THAT A LESSEE WHO IS FOUND NOT TO BE MEETING DUE DILIGENCE REQUIREMENTS ON OTHER LEASES MAY NOT BID FOR NEW LEASES; THIS PROVISION ALONE IS SUFFICIENT INCENTIVE TO A LESSEE TO EXPLORE DILIGENTLY IN ORDER TO PROTECT HIS RIGHT TO BID FOR FUTURE LEASES.

THE FIVE-YEAR LEASE TERM IS, IN ITSELF, A SIGNIFICANT INCENTIVE.

IN ADDITION TO BEING PRECLUDED BY THE ACT, ANY PROPOSAL TO REQUIRE THE SUBMISSION OF EXPLORATION PLANS WITHIN A SPECIFIC TIME FRAME IS INCONSISTENT WITH SOUND EXPLORATORY PRACTICES. IT FAILS TO RECOGNIZE THE EVOLVING NATURE OF EXPLORATORY ACTIVITY AND PRIORITIES, WHEREBY EACH ENSUING OPERATION, BE IT DRILLING OR GEOPHYSICAL SURVEYS, IS BASED ON INFORMATION OBTAINED FROM PRIOR ACTIVITIES.

ONE MAJOR ELEMENT WHICH THIS PROPOSAL FAILS TO RECOGNIZE IS THAT MUCH OF OUR OCS EXPLORATION IS TAKING PLACE IN DEEPER WATER, WHERE MANY WELLS WILL COST \$20 TO \$25 MILLION OR MORE. NO PRUDENT OPERATOR WILL MAKE SUCH A SIGNIFICANT FINANCIAL COMMITMENT WITHOUT OBTAINING AND EVALUATING ALL AVAILABLE DATA IN A LOGICAL PLANNED SEQUENCE.

TO ATTEMPT TO DEFINE AN ENTIRE DRILLING PROGRAM BEFORE THE FIRST WELL HAS BEEN DRILLED, OR ESSENTIAL DETAILED GEOPHYSICAL DATA ACQUIRED, WILL SIMPLY RESULT IN A CONTINUOUS SERIES OF EXPLORATORY PLAN MODIFICATIONS, REVISIONS, AND, FREQUENTLY, THE PREPARATION OF ENTIRELY NEW PLANS.

FACED WITH THE PROSPECT OF SUBMITTING ILL-CONCEIVED, INADEQUATELY RESEARCHED EXPLORATION PLANS, OR BEING FOUND TO BE NOT "DULY DILIGENT" IN THEIR PERFORMANCE, OPERATORS WILL BE FACED WITH THE ALTERNATIVE OF PREMATURELY SURRENDERING THEIR LEASE(S) BEFORE THE FULL SPECTRUM OF AN EXPLORATORY PLAN RUNS ITS COURSE. THE RESULT WILL BE EITHER: (1) LESS EFFICIENT EXPLORATION RESULTING FROM THE DRILLING OF POORLY LOCATED WELLS, OR (2) NO EXPLORATION AT ALL RESULTING FROM PREMATURE ABANDONMENT OF THE LEASE(S). BOTH CONSEQUENCES WILL RESULT IN LESS PROMPT AND EFFECTIVE EVALUATION OF OCS RESOURCE POTENTIAL.

MOREOVER, THESE PROPOSED DEADLINES FOR THE FILING OF EXPLORATION PLANS WOULD RESULT IN AN AVALANCHE OF PAPERWORK FOR BOTH INDUSTRY AND THE U.S.G.S., WITH THE RESULT THAT OPERATORS OFTEN WOULD NOT HAVE SUFFICIENT TIME TO PREPARE THEIR PLANS AND THE AGENCY WOULD NOT HAVE SUFFICIENT TIME TO EVALUATE THEM.

EXPLORATION PLANS FOR HUNDREDS OF LEASES IN EXISTENCE

AT THE TIME THESE REGULATIONS BECOME EFFECTIVE WOULD ALL HAVE TO BE FILED WITHIN A RELATIVELY SHORT PERIOD. FOR EXAMPLE, 93 LEASES WERE ISSUED AFTER THE BALTIMORE CANYON LEASE SALE ON AUGUST 17, 1976. WITH A FEW POSSIBLE EXCEPTIONS, EXPLORATION PLANS FOR ALL OF THESE LEASES WILL BE DUE AT THE SAME TIME - I.E., BY APPROXIMATELY MID-NOVEMBER, 1979, ASSUMING THAT THESE REGULATIONS BECOME EFFECTIVE BY MID-JUNE.

THE SAME SCENARIO WOULD, OF COURSE, APPLY TO LEASES ISSUED AFTER OTHER RECENT SALES.

SINCE THE ACT REQUIRES A SECRETARIAL DECISION ON EXPLORATION PLANS WITHIN 30 DAYS OF SUBMISSION, WE SUGGEST THAT IT WILL PROVE DIFFICULT - AND OFTEN IMPOSSIBLE - FOR THE DIRECTOR TO CONSIDER AND PROCESS THIS VOLUME OF EXPLORATION PLANS.

PART 250.34-2 DEVELOPMENT AND PRODUCTION PLANS

1. PARAGRAPH (a) (1) PROVIDES THAT NO DEVELOPMENT OR PRODUCTION MAY BE COMMENCED ON ANY LEASE ISSUED IN ANY AREA OF THE OCS UNTIL A DEVELOPMENT AND PRODUCTION PLAN HAS BEEN SUBMITTED TO AND APPROVED BY THE DIRECTOR.

THIS LANGUAGE CLEARLY IGNORES THE EXCEPTIONS WHICH ARE PROVIDED FOR IN SECTION 25 (a) (1) OF THE ACT, AS WELL AS THE INTENT OF THE CONGRESS AS STATED IN THE CONFERENCE REPORT. AT

PAGE 115 OF THAT REPORT (S. RPT. 95-1091) IT IS STATED:

"THE CONFERENCE REPORT REQUIRES A PLAN TO BE SUBMITTED FOR ALL FUTURE LEASES EXCEPT IN THE GULF OF MEXICO." "THUS, THE MANDATE AND SPECIFIC PROCEDURES OF THIS BILL THAT THE SECRETARY OF INTERIOR MUST SECURE SUBMISSION, AND THEN REVIEW, APPROVE OR DISAPPROVE A DEVELOPMENT AND PRODUCTION PLAN APPLIES TO NEW LEASES OR EXISTING LEASES WHERE THERE HAS NOT YET BEEN A DISCOVERY AND DOES NOT APPLY TO LEASES, OLD OR NEW, IN THE GULF OF MEXICO."

PART 250.43-2 MUST BE REWRITTEN SO THAT IT FULLY CONFORMS WITH THE ACT /SECTION 25 (a) (1)/.

WE WOULD REMIND YOU THAT THE CONGRESS HAD SOME VERY GOOD REASONS FOR GRANDFATHERING GULF OF MEXICO LEASES IN THE LANGUAGE OF SECTION 25(a). (A FEW LEASES IN THE SOUTHERN CALIFORNIA OCS ARE ALSO GRANDFATHERED.)

THESE REASONS HAVE TO DO WITH WHAT HAPPENED AFTER YOUR AGENCY REVISED THESE 30 CFR 250.34 REGULATIONS ON JANUARY 28, 1978. BY JULY OF THAT YEAR, IT BECAME OBVIOUS THAT OIL AND GAS DEVELOPMENT IN THE GULF WAS BEING SEVERELY HAMPERED BY THESE NEW REGULATIONS. THE EXTENT OF THE PROBLEMS THUS CREATED BY THE NEW

REGULATIONS HAS BEEN DESCRIBED IN SOME DETAIL BY A LETTER (DATED JULY 27, 1978) FROM THE OFFSHORE OPERATORS COMMITTEE TO THE U.S.G.S.

WE SUBMIT THAT CONGRESS RESPONDED TO THIS SITUATION BY THE LANGUAGE IN SECTION 25(a). CONGRESS EMPHASIZED ITS INTENTION BY THIS STATEMENT IN THE CONFERENCE REPORT:

"IT IS HOPED THAT THE SECRETARY OF THE INTERIOR WILL APPLY EXISTING LAWS AND REQUIREMENTS TO TRACTS WHICH HAVE COMMENCED DEVELOPMENT AND PRODUCTION, AND TO OTHER AREAS OF THE GULF OF MEXICO, WHERE DEVELOPMENT AND PRODUCTION ACTIVITIES HAVE BEEN GOING ON FOR A NUMBER OF YEARS, IN SUCH A MANNER AS TO LIMIT BUREAUCRATIC RED TAPE AND OTHERWISE MINIMIZE DELAYS IN THE SEARCH FOR AND PRODUCTION OF OIL AND GAS."

OBTAINING, THEN, THIS PART OF THE PROPOSED REGULATIONS TO REQUIRE DEVELOPMENT AND PRODUCTION PLANS IN THE GULF OF MEXICO IS CONTRARY TO BOTH THE LETTER AND THE INTENT OF THE OCS LANDS ACT AS AMENDED.

PROPOSED REVISION OF 30 CFR PART 252
OCS INFORMATION PROGRAM

OUR MAJOR CONCERNS WITH THE PROPOSED REVISION OF THESE REGULATIONS HAVE TO DO WITH THEIR TREATMENT OF CONFIDENTIAL AND

PROPRIETARY DATA AND WITH TWO INSTANCES IN WHICH AN IMPORTANT PROVISION IN THE ACT, RELATING TO THE PROTECTION OF A LESSEE'S OR PERMITTEE'S COMPETITIVE POSITION, HAVE BEEN OVERLOOKED.

THE PARAGRAPH ON THE SUMMARY REPORT TO STATES (PARAGRAPH (a) OF PART 252.4) SHOULD BE EXPANDED TO IMPLEMENT THE LANGUAGE IN SECTION 26(d) (1) (B) (ii) OF THE ACT WHICH PERMITS THE SECRETARY TO WITHHOLD DATA WHICH, IF DISCLOSED, WOULD UNDULY DAMAGE THE COMPETITIVE POSITION OF THE LESSEE OR PERMITTEE WHO PROVIDED THE SECRETARY WITH SUCH INFORMATION. THIS CAN BE DONE BY REVISING THE PENULTIMATE SENTENCE IN PARAGRAPH (a) TO READ AS FOLLOWS:

"THE SUMMARY REPORT SHALL NOT CONTAIN DATA OR INFORMATION WHICH THE DIRECTOR DETERMINES IS EXEMPT FROM DISCLOSURE IN ACCORDANCE WITH § 252.6 OF THIS PART NOR ANY DATA WHICH, AS DETERMINED BY THE SECRETARY, WOULD, IF DISCLOSED, UNDULY DAMAGE THE COMPETITIVE POSITION OF THE LESSEE OR PERMITTEE WHO PROVIDED THE SECRETARY WITH THE INFORMATION WHICH THE SECRETARY HAD PROCESSED, ANALYZED OR INTERPRETED."

PART 252.5 INFORMATION TO BE MADE AVAILABLE TO AFFECTED STATES

THIS SECTION SHOULD ALSO BE REVISED TO CONFORM WITH

THE PROVISIONS OF THE ACT /SECTION 26 (d) (1) (B) (ii)/. THIS CAN BE DONE BY REVISING THE FINAL SENTENCE TO READ AS FOLLOWS:

"THE DIRECTOR SHALL NOT MAKE AVAILABLE ANY INFORMATION WHICH THE DIRECTOR DETERMINES IS EXEMPT FROM DISCLOSURE IN ACCORDANCE WITH § 252.6 OF THIS PART, NOR ANY DATA WHICH, AS DETERMINED BY THE SECRETARY, WOULD, IF DISCLOSED, UNDULY DAMAGE THE COMPETITIVE POSITION OF THE LESSEE OR PERMITTEE WHO PROVIDED THE SECRETARY WITH THE INFORMATION WHICH THE SECRETARY HAD PROCESSED, ANALYZED OR INTERPRETED."

PART 252.7 PRIVILEGED AND PROPRIETARY DATA AND INFORMATION
TO BE MADE AVAILABLE TO AFFECTED STATES

TWO SUBPARAGRAPHS / (a) (1) (i) AND (ii) / SHOULD BE STRICKEN FOR THE FOLLOWING REASONS:

1. THESE PROVISIONS RELATE TO THE LEASING PROCESS WHICH IS ESTABLISHED UNDER SECTION 8 OF THE ACT; THEY ARE NOT APPLICABLE TO SECTION 26, THE OCS OIL AND GAS INFORMATION PROGRAM, WHICH THE PROPOSED REGULATIONS ARE INTENDED TO IMPLEMENT.

2. ANY REGULATIONS TO IMPLEMENT SECTION 8(g) (TO

WHICH SUBPARAGRAPHS (a) (1) (i) AND (ii) RELATE) PROBABLY SHOULD BE INCORPORATED INTO EITHER 43 CFR PART 3300 OR 30 CFR PART 250.

3. THE PROVISIONS IN THESE SUBPARAGRAPHS /(a) (1) (i) AND (ii)/ WHICH WOULD PERMIT A DESIGNATED STATE OFFICIAL TO RECEIVE PRIVILEGED OR PROPRIETARY DATA OR INFORMATION PRIOR TO A LEASE SALE ARE IN DIRECT CONFLICT WITH THE ACT /SECTION 26 (d) (2)/ WHICH PROVIDES THAT CONFIDENTIAL AND PROPRIETARY DATA MAY BE INSPECTED BY A DESIGNATED OFFICIAL AFTER A LEASE SALE.

WE BELIEVE, THEREFORE, THAT THESE SUBPARAGRAPHS /(a) (1) (i) AND (ii)/ MUST BE DELETED.

THE API AND ITS MEMBER COMPANIES ARE ANXIOUS TO COOPERATE IN THE DEVELOPMENT AND IMPLEMENTATION OF THE OUTER CONTINENTAL SHELF OIL AND GAS REGULATIONS WHICH WILL SERVE THE PURPOSE OF THE OCS LANDS ACT; THAT IS, TO EXPEDITE AND FACILITATE THE DEVELOPMENT OF OUR OCS RESOURCES WHILE AT THE SAME TIME SAFEGUARDING THE ENVIRONMENT TO THE MAXIMUM EXTENT POSSIBLE.

STAFF PERSONNEL OF OUR MEMBER COMPANIES ARE AVAILABLE AT YOUR CONVENIENCE TO DISCUSS WITH YOU AND YOUR STAFF THESE RECOMMENDATIONS.

American Petroleum Institute
2101 L Street, Northwest
Washington, D.C. 20037
202-457-7090



January 18, 1979

V. Kenneth Leonard
Transportation Director

Commandant (G-CMC/81)
U. S. Coast Guard
400 7th Street, SW
Washington, DC 20590

Dear Sir,

The American Petroleum Institute (API) is pleased to submit its comments on the proposed rulemaking (CGD 77-055) implementing the Offshore Oil Pollution Liability and Compensation Fund, Title III, of the OCS Lands Act Amendments of 1978. API member companies are engaged in all phases of the exploration, development, production and transportation of oil from the OCS and are extremely interested in the form and substance of the proposal.

SUMMARY

API supports the adoption of the proposed regulations with the following two major exceptions. First, the proposal discriminates against the smaller operator on the OCS, effectively limiting competition to those major companies who are able to qualify as self-insurers. Secondly, the proposal exceeds the intent of Congress by allowing compensation to be set on the basis of unit value (\$ per organism). This concept is new and the ramifications are extremely complex and uncertain. Further, the concept is currently being reviewed by the courts. We respectfully suggest that the public interest will not be served if such a concept becomes part of the regulatory structure.

In addition to these two objections, we offer a number of suggestions where clarification would be helpful or procedures might be simplified.

An equal opportunity employer

DISCUSSION1. THE PROPOSED RULES DISCRIMINATE AGAINST THE SMALLER OFFSHORE OPERATOR

Section 130.203 of the proposed rules limits the total amount of financial responsibility required to \$50 million for those companies who are able to:

- . qualify as a self insurer's
- . provide surety bond
- . provide a guarantor

The smaller operator, as a general rule, will not be able to provide evidence of financial responsibility through any of these three means. The only option available to the smaller operator is insurance.

As written, the rules would require the smaller operator to provide evidence of insurance for \$35 million for each facility. The requirement for individual insurance policies for each offshore facility effectively eliminates the upper limit on financial responsibility for the smaller operator. This is unreasonable, and to our knowledge, such insurance is not available. The end result of these proposals would be decreased competition on the OCS. This clearly is not the intent of Congress. Section 102(2)(D) of the Outer Continental Shelf Lands Act Amendments of 1978 states in part:

"The purposes of this act are to _____ . . . (D) to preserve and maintain free enterprise competition."

2. THE PROPOSED RULES DO NOT RECOGNIZE EXISTING INDUSTRY OPERATING PRACTICES

The following comments and suggestions for changes are offered in order that the proposed rules more closely reflect actual industry operating practice or operating considerations. Comments are addressed to specific sections of the proposed rules.

(1) 130-203(a)

In this section an offshore drilling unit must establish financial responsibility in the amount of \$35 million. It is standard industry procedure for the lessee to assume responsibility for major polluting incidents.

We request that this section be clarified to specifically allow the lessee to act as guarantor for the offshore drilling unit. In addition, if the lessee has previously established evidence of financial responsibility for the maximum amount required by the regulations, an additional submission of evidence should not be required.

(2) 130.203(c)

The impact of this section on the smaller operator was discussed previously. In addition, Section 130.203(c) ignores a type of insurance policy in general use that provides coverage per incident. This type of policy is quite similar to an individual's automobile insurance where more than one vehicle is covered under the same policy. The existence of this type of insurance policy should be recognized.

(3) 130.203(f)

It is common practice in the industry for joint owners to assume liability in proportion to their share of the property. For example, in the North Sea, joint owners individually establish financial responsibility in proportion to their share of the lease. These are then aggregated by the operator. Section 130.203(f) should be expanded to allow for a jointly owned facility to establish financial responsibility through either:

- . One of the joint owners to assume the total liability
- . Each of the joint owners to assume part of the total liability in proportion to their share of the lease.

(4) 130.207(b)(1)

This section provides that an insurer must agree to be sued directly for claims. Our current understanding is that no insurance company would be willing to agree to this provision. Since insurance is the only viable means for the smaller operator to establish financial responsibility, this section effectively eliminates the small operator from the OCS.

(5) 130.207(e)

The requirement for joint insurers to be jointly and severably liable does not reflect current practice. It is not uncommon for exposure levels on the order of \$35 million to be shared by a number of underwriters. As written, Section 103.207(e) disallows the underlying basis for joint insurance. The result will be the elimination of joint insurance plans and upward pressure on costs. This will restrict the ability of all operators to secure insurance and create additional barriers to the smaller operator. Similar provisions in the deep-water port licensing requirements contributed to the collapse of the Seadock proposal and the withdrawal of half of the original members of LOOP.

(6) 130.209(b) and 130.213(a)

The language contained in these sections closely follows that proposed by the Federal Maritime Commission (FMC) in its proposed rulemaking addressing demonstration of financial responsibility as required by the Clean Water Act Amendments of 1977. At that time, the FMC received comments stating that in the normal course of business, firms do not obtain statements from their Certified Public Accountants certifying as to the qualified current and total assets located in the United States.

The FMC, accepted the suggestion that a similar certificate executed by an appropriate member of management (e.g. Controller or Treasurer) would suffice. We request that Sections 130.209(b) and 130.213(a) be modified to reflect this established practice.

(7) 130.311(a)

We suggest that the time period allowed for an owner or operator to deny designation as the source of oil pollution be increased to 15 working days. A decision to deny designation is extremely important and the owner/operator should be allowed sufficient time to secure the advice of experts and review the consequences of this action.

3. THE PROPOSED RULES CREATE UNCERTAINTY IN THE AREA OF CRUDE OIL PRICING

The proposed rules levy a fee of \$.03 per barrel on all oil produced on the OCS. We urge that prior to the publication of the final rules, that the Coast Guard coordinate with the Department of Treasury, the Federal Economic Regulatory Commission, Department of Energy and all other concerned parties to insure that this fee will be considered as an add-on to the wellhead price of non-royalty oil. By lease agreement the federal government retains ownership of a percentage of oil produced on the OCS. We believe it is the intent of Congress that the cost of protection offered the public by the existence of the Fund should be borne by the consumer.

4. THE PROPOSED RULES EXCEED THE INTENT OF CONGRESS, AND LEGITIMIZE A CONCEPT CURRENTLY BEING CONTESTED IN THE COURTS

The proposed rules (Section 131.217(a)(2)) establish a claims procedure for injury to, or destruction of natural resources based on a unit value (\$ per organism), if restoration or replacement is not possible. The concept of unit value is quite new. To our knowledge there has been only one case that has relied upon this concept to assess damages from an oil spill. (Puerto Rico v. S. S. Zoe Colocotroni, (D.C.P.R., 1978), 11 ERC 2107). It is our information that this decision is currently under appeal.

Second, under Section 303 of the Outer Continental Lands Act Amendments of 1978 claims are limited to:

"Claims for economic loss, arising out of or directly resulting from oil pollution may be asserted for . . .
(c) injury to, or destruction of, natural resources;"

An economic loss can only be established if, historically, society operating through the market place establishes a value for

commodity. Lacking such an historical basis, any unit value placed on natural resources will be arbitrary.

Third, assuming that, as written, the concept of unit value was intended to apply to non-commercial natural resources any loss would be based on an estimated loss of organisms. Both the validity of the unit value concept and procedures to establish estimated losses are currently being debated in the scientific community.

To establish losses on the basis of measurement units and techniques which are still being debated in the scientific community is unreasonable. Therefore, we request that the Coast Guard reconsider its decision to include the concept of "unit value". To summarize:

- . The concept embraces fundamental legal questions that are still being reviewed by the judicial system,
- . PL 95-372 did not contain any reference to the concept of "unit value", and the scientific community is still debating its validity,
- . Procedures needed to establish impacts have not been developed,
- . The potential ramifications are extremely serious and have not been fully explored by industry, government or the public,
- . Unit values may be site specific or vary with market, social and environmental conditions. They cannot be transferred between locations.

Based on the above, we most strongly urge that Section 131.217(a)(2) be deleted.

5. THE PROPOSED RULES UNDERSTATE THE PROOF NEEDED TO ESTABLISH INJURY TO, OR DESTRUCTION OF, NATURAL RESOURCES

Establishing the impact of oil discharged to the marine environment is an extremely difficult procedure. As written, Section 131.215 understates the proof required to establish injury to or destruction of natural resources. We recommend that Section 131.215 be expanded to require the claimant to:

- . Establish a baseline from which the injury is measured. This baseline must take into account the seasonal and annual fluctuations that are a normal part of the marine ecosystem.
- . Establish that the injury or destruction of the natural resource occurred as a result of the spill in question and that population changes perceived by the claimant were not pre-existing or caused by natural factors.

In addition, Section 131.215(a)(3) should be expanded to read,

"The cost to restore, to comparable non-oiled conditions or replace the natural resource; and"

6. THE PROPOSED RULES IGNORE THE RESTORATIVE CHARACTERISTICS OF THE MARINE ENVIRONMENT

There is a good body of evidence that supports the fact that introduction of oil into the marine environment does not necessarily result in a long-term change in the marine ecosystem. It has also been demonstrated that in many instances the marine environment has the capability of restoring itself faster than any artificial restoration effort that could be initiated by man.

We urge that proof required under Section 131.215 be expanded to include a determination of the time required for natural processes to restore the injured resources to pre-spill conditions. In addition, this restorative capability should be included in establishing the cost to restore or replace, or the economic loss resulting from injury or destruction to a natural resource under Section 131.215(a)(3) and 131.215(a)(4). We recommend that these non-commercial natural resource values be limited to those costs or losses that would be incurred if the natural restorative process exceeds a reasonable time limit. We suggest that a reasonable time limit would be two to three seasonal cycles. We have attached, for your information, a short bibliography of articles supporting this concept.

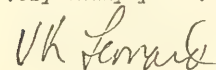
CONCLUSION

In closing, API appreciates the opportunity to comment on the proposed regulations. In general we support the proposal, with the exception of:

- . The treatment of insurance as a means of establishing financial responsibility which unfairly impacts the smaller operator,
- . The inclusion of the "unit value" concept, and
- . Minor procedural changes.

API would be pleased to discuss any of our comments in more detail should this be desired.

Very truly yours,

A handwritten signature in dark ink, appearing to read "V. K. Leonard". The signature is written in a cursive, flowing style.

V. K. Leonard

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March 23, 1979

Honorable John M. Murphy
Chairman
House of Representatives
Ad Hoc Select Committee on
the Outer Continental Shelf
House Annex #2
Room 3383
300 D Street, S.W.
Washington, D. C. 20024

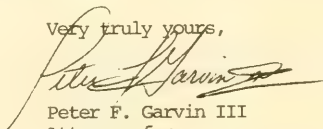
Dear Chairman Murphy:

Enclosed are copies of comments recently submitted to the Department of Interior by Associated Gas Distributors. The comments address proposed DOI regulations governing Oil and Gas Information Programs, and Oil, Gas and Sulphur Exploration, Development and Production on the Outer Continental Shelf. AGD respectfully requests that these comments be included in the record compiled by your committee in its recent oversight hearings on the OCS Lands Act Amendments of 1978.

Associated Gas Distributors is vitally interested in expeditious development and production of the hydrocarbon resources on the Outer Continental Shelf. The enclosed comments highlight several regulatory and statutory provisions which may become an impediment to effective and equitable implementation of the OCS Act. AGD trusts that the select committee will find these comments helpful.

Thank you for your consideration. Please contact this office if there are questions concerning this matter.

Very truly yours,



Peter F. Garvin III
Attorney for
Associated Gas Distributors

Enclosures

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR

United States Geological Survey

Comments of Associated Gas Distributors
on Proposed Part 252: Outer Continental
Shelf Oil and Gas Information Program

Associated Gas Distributors (AGD) is an unincorporated association of 44 natural gas distribution companies serving over 11 million customers along the Atlantic Seaboard.^{*/} AGD member companies derive a large portion of their gas supply from the offshore Federal domain and are vitally interested in the orderly and expeditious development of hydrocarbon resources, particularly natural gas, from the Outer Continental Shelf (OCS). In a period of deep curtailment by pipeline suppliers, AGD member companies regard prompt exploration for and development of OCS natural gas resources as a crucial element of the Nation's energy policy.

On January 17, 1979, the United States Geological Survey (USGS) published and requested comments upon proposed part 252 -- OCS Oil and Gas Information Program. 44 Fed. Reg. 3524. The proposed regulations would require all persons to make available to the Survey all data and information obtained from OCS oil and gas exploration, development or production

^{*/} A list of AGD member companies is attached as Appendix A.

and to provide copies to the Secretary upon request. In accordance with the requirements of the OCS Lands Act amendments of 1978, provisions would be made for reimbursement of processing and reproduction costs incurred by lessees in responding to requests for information by the Secretary. Also, the proposed regulations would require the Director of the USGS to transmit to affected States (and, upon request, to the executive of an affected local government) an index or summary, as well as, copies of this data and information in order to assist these governments in planning for the potential impacts of offshore oil and gas exploration, development and production. Most importantly, the proposed regulations incorporate substantial safeguards for protecting the confidentiality of proprietary and privileged information submitted by lessees to the Secretary.

These regulations properly balance the important informational needs of Federal, State and local governments and the burdens, costs and desire to protect proprietary and privileged information on the part of OCS developers supplying that information. While AGD heartily endorses these programs, the proposed regulations fail to effectuate fully the dictates of the OCS Lands Act Amendments of 1978 (the Act). The regulations should be amended prior to adoption in final form to remedy the defects outlined below.

A. Exceptions to the Protection of Privileged and Proprietary Information

Section 26(c) of the OCS Act provides that no privileged or proprietary information may be transmitted to a state unless the lessee, or permittee, and all persons to whom such information has been sold under a promise of confidentiality, agree to the transmittal. P.L. No. 95-372 (1978). Section 26(d) provides an exception to this rule for information to be supplied to Governors of affected states concerning activities adjacent to such states. This subsection of the Act provides that in the latter cases, the Governor may designate a state official to inspect, at a regional location, proprietary and privileged information regarding activities adjacent to the state. However, the subsection also provides that no such inspection shall occur prior to the sale of a lease covering that area.

Section 252.7(a)(1)(ii) of the proposed regulations is in direct contravention to both of the foregoing statutory provisions contained in section 26 of the Act. The proposed regulations would allow designated state officials not only to inspect privileged and proprietary information and data, but also to take actual receipt of such information. Furthermore, this activity would take place after nominations for leasing areas but before the lease sale. The Act clearly states that the only exception to the non-disclosure requirements is for inspection, not receipt of confidential data. More importantly,

the Act absolutely provides that no such disclosure shall occur prior to the sale of a lease covering the area involved. Accordingly, subsection 252.7(a)(i)(ii) must be deleted from the proposed regulations.

B. Immunity of Lessees from Liability for Consequences of Interpretations Submitted to the Secretary in Good Faith

The Act states that a lessee or permittee "shall not be held responsible for any consequence of the use of or reliance upon" an interpretation contained in information provided to the Secretary, if provided in good faith. P.L. No. 95-372, § 26(a)(1)(B). The proposed regulations would incorporate this protection by providing, in § 252.3(a), that no permittee or lessee submitting information shall be responsible for consequences of use of or reliance upon interpreted geophysical information or interpreted geological information, as defined in the regulations. Unfortunately, this protection is not coextensive with the protection mandated by Congress in the Act.

The Act's protection applies to all interpretations contained in information submitted by lessees or permittees. The proposed regulations would create four categories of information; analyzed geological information, interpreted geological information, interpreted geophysical information and processed geophysical information. Analyzed geological information and processed geophysical information would not be

within the protection granted interpretations. While most of the information within these categories is raw data and test or survey results, the definitions are broad enough to include some interpretations which by law, must be protected.

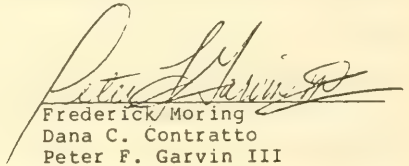
Analyzed geological information is defined to include but is not limited to raw data and test results. It specifically includes descriptions of hazardous conditions. The decision whether a particular set of facts indicate a "hazardous" condition obviously depends upon subjective analysis and evaluation. As such, information provided in this category could constitute an interpretation. Similarly, processed geophysical information is defined to include but is not limited to data which has been corrected, filtered, rearranged, combined or transformed. The decision to filter out certain information, or apply corrective factors to data involves subjective input and evaluation which involves an interpretation of facts and circumstances by the responsible party. Thus, analyzed geological information and processed geophysical information, as defined in the proposed regulations both may contain some information which would, in many circumstances, constitute "interpretations" and should be protected according to the Act.

AGD, therefore, respectfully suggests that section 252.3(a) of the proposed regulations be amended to define the scope of protection afforded to "interpretations" without reference to these categories of information, by providing that no lessee or

permittee shall be held responsible for the consequences of use of or reliance upon any interpretation contained in information supplied to the Secretary and submitted in good faith. This would have the advantage of applying the immunity on a case by case basis, in harmony with the equities of each particular set of circumstances.

AGD appreciates the opportunity to present these comments on proposed part 252 and strongly urges that the recommendations herein be incorporated in the final version of part 252.

Respectfully submitted,



Frederick Moring
Dana C. Contratto
Peter F. Garvin III

Attorneys for Associated
Gas Distributors

Dated: March 16, 1979

ASSOCIATED GAS DISTRIBUTORS

Baltimore Gas and Electric Co.
Bay State Gas Co.
The Berkshire Gas Co.
Boston Gas Co.
Bristol & Warren Gas Co.
The Brooklyn Union Gas Co.
Cape Cod Gas Co.
Central Hudson Gas & Electric Corp.
Chesapeake Utilities Corp.
City of Holyoke, Mass., Gas & Electric Dept.
City of Westfield Gas & Electric Light Dept.
Commonwealth Gas Co.
Concord Natural Gas Corp.
The Connecticut Gas Co.
Consolidated Edison Company of New York, Inc.
Delmarva Power & Light Co.
Elizabeth Gas Co.
Fall River Gas Co.
Fitchburg Gas & Electric Light Co.
Gas Service, Inc.
The Hartford Electric Light Co.
Haverhill Gas Co.
Long Island Lighting Co.
Lowell Gas Co.
Manchester Gas Co.
Lynchburg Gas Co.
New Bedford Gas & Edison Light Co.
New Jersey Natural Gas Co.
New York State Electric & Gas Corp.
Northern Utilities, Inc.
The Pequot Gas Co.
Philadelphia Electric Co.
Philadelphia Gas Works
Piedmont Natural Gas Company, Inc.
Providence Gas Co.
Public Service Company of North Carolina, Inc.
Public Service Electric & Gas Co.
Rochester Gas & Electric Corp.
South County Gas Co.
South Jersey Gas Co.
The Southern Connecticut Gas Co.
UGI Corporation
Valley Gas Co.
Washington Gas Light Co.

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR

United States Geological Survey

Comments of Associated Gas Distributors
on Proposed Part 250: Oil and Gas and
Sulphur Operations in the Outer Continental Shelf

Associated Gas Distributors (AGD) is an unincorporated association of 44 natural gas distribution companies serving over 11 million customers along the Atlantic seaboard.^{*/} AGD member companies derive a substantial portion of their gas supply from the offshore Federal domain. As a result, they are vitally interested in the efficient and expeditious development of hydrocarbon resources, particularly natural gas, from the Outer Continental Shelf (OCS). In a period of deep curtailment by their pipeline suppliers, AGD members regard prompt exploration for, and development of, natural gas resources as a crucial ingredient of the Nation's energy policy.

The United States Geological Survey (USGS) recently published and requested comments upon proposed part 250 -- Oil and Gas and Sulphur Operations in the Outer Continental Shelf. 44 Fed. Reg. 3513 (Jan. 17, 1979). The proposed regulations would amend current Department of Interior rules regarding submission of plans and environmental reports prior to exploration,

^{*/} A list of AGD member companies is attached hereto as Appendix A.

development or production in the Outer Continental Shelf. These amendments incorporate provisions required by the OCS Lands Act Amendments of 1978. In addition, the regulations would provide time frames within which lessees must submit plans for approval, and within which state and federal governments would be required to act on proposed plans. AGD endorses the amendments to the extent that they expedite offshore exploration and development. However, the following problems must be resolved before the regulations are adopted.

A. Time Limits

1. Transmission of Submitted Plans to State and Local Governments

The OCS Lands Act Amendments of 1978 (the Act) provides that the Secretary must submit, except for privileged and proprietary information, oil and gas development and production plans to the Governor of any affected State, and upon request, to the executive of any affected local government within ten days after receipt of such plan. P.L. 95-372, § 25(a)(3) (1978). Arguably, this provision is incorporated in section 250.34-2(b)(2) of the proposed regulations which provides that . . . "within ten days after the Director receives the required number of copies" of a "submitted" plan the Director shall transmit a copy to the appropriate entities. 30 C.F.R. 250.34-2(b)(2). While this provision allows a greater period

of time for transmission of reports to the states than the Act envisioned, AGD believes it is essentially consistent with the purpose of the Act.

This ten day time period, however, only applies to transmission of development and production plans. The Act contains no similar provision pertaining to transmission of exploration plans to the Governors of affected states. The proposed regulations, section 250.34-1(b)(2), would require that immediately after receiving a sufficient number of copies from a lessee, the Director shall transmit a copy of an exploration plan to appropriate entities. While this appears to expedite the approval process, the term "immediately" is indefinite and may be interpreted to encompass an inordinately long period of time under some circumstances. AGD, therefore, suggests that section 250.34-1(b)(2) be amended to comport with section 250.34-2(b)(2) by requiring the Director to transmit copies of exploration plans to appropriate entities within ten days after receiving a sufficient number of copies of a plan from the lessee.

This approach is reasonable and should not impose an undue burden on the Department. There is no practical difference in the steps necessary to transmit exploration plans or development and production plans. Therefore, there is no sound reason why the same time limitation for transmittal should not apply to both types of plans.

2. Inconsistency Between the Coastal Zone Management Act and the OCS Lands Act

The Coastal Zone Management Act of 1972 (CZMA), as amended, provides that no federal agency shall grant any license or permit for any activity described in detail in an exploration plan or a development and production plan for any area affecting the coastal zone of a state with an approved management program until (1) the state signifies that such plan is consistent with its management plan, (2) the state is conclusively presumed to concur in the consistency of the plan, or (3) the Secretary finds that the activity is consistent with the objectives of the CZMA or is necessary in the interest of national security. 16 U.S.C. § 1456(c). A state is conclusively presumed to concur in the consistency of a proposed plan if it makes no response within three months of receiving a plan. This period may be extended to six months if the state so requests before the expiration of the three month period. P.L. No. 95-372, § 504 (1978).

The OCS Act, as amended, requires the Director to approve, disapprove, or order modification of, a proposed exploration plan within 30 days of its submission. P.L. No. 95-372, § 206(c)(1). The proposed regulations, section 250.34-1(e)(2), attempt to reconcile these differing statutory requirements, as they affect exploration plans, by providing that the Director

may grant a "conditional" approval of exploration plans. The conditional approval would become final when the states involved concur in, or are conclusively presumed to concur in, the consistency of the plan with the states' approved CZMA plans. The proposed "conditional" approval of exploration plans does not comply with the requirements of the Act which clearly states that the Director must approve, disapprove or order modification of a plan within 30 days of submission. The Act contains no reference to "conditional approval." Conditional approval frustrates the intent of the Act by delaying the approval process beyond the thirty day period which Congress determined was sufficient for administrative review and action upon exploration plans.

Assuming arguendo, that the conditional approval process is legal, the inconsistency between the CZMA and the OCS Act is again confronted in the approval process for development and production plans. The CZMA grants affected states from a minimum of three months to a maximum of six months to decide whether a development and production plan is consistent with the states' approved CZMA plans. The Act, on the other hand, provides that where no environmental impact statement is required, Governors of affected states shall have sixty days to comment on the plan and the Director must approve, disapprove or order modification of the plan within sixty days after receiving these comments. P.L. No. 95-372, § 25(g),(h).

Therefore, the Director must act upon these development and production plans within 120 days of submission. The proposed regulations fail to resolve this inconsistency. Section 250.34-2(f) would provide that where no environmental impact statement is required the Director must approve, disapprove or order modification of a development and production plan no later than sixty days after "the last comment period." It is not clear what is meant by the phrase, "the last comment period." If the comment period referred to is the sixty days mentioned in the Act, the Director could be forced to rule on the acceptability of a plan before an affected state with an approved CZMA plan exercised its apparent right under the CZMA to take up to six months to decide whether the proposed plan is consistent with the state's CZMA plan. If the reference is to the six month period available under the CZMA, the Director would not be in compliance with the time requirements of the OCS Act. Furthermore, there is no conditional approval process proposed for development and production plans.

The uncertainty and possible delay caused by these conflicting statutory provisions is unacceptable. Timely processing of all applications is essential to expeditious development of the Outer Continental Shelf. AGD, therefore, respectfully suggests that the Department of the Interior work with the Department of Commerce to resolve, through legislation or rulemaking, the apparent inconsistency in statutory obligations

highlighted above. Certainly the reasonable concern of states regarding activities which might have an impact on their coastal zones and the need to provide for state involvement in the review and approval process should be considered. However, in approaching this problem, appropriate weight must also be accorded the need to increase expeditiously natural gas supplies as well as the determinations made by Congress that administrative action should be taken on exploration plans within 30 days of submission and on development and production plans within no later than 120 days after submission or sixty days after issuance of a final environmental impact statement. Indeed, it would seem that the specific time periods set forth in the OCS Act should prevail over the earlier general provisions of the CZMA.

B. Cost of Additional Surveys and Data

The proposed regulations, §§ 250.34-1(m), 250.24-2(n), would provide that the Director may require the lessee to conduct additional surveys and provide data regarding exploration, development and production, "at no cost to the lessor". (Emphasis added). This provision is in direct conflict with the dictates of the Act. Section 26(a)(1)(A) of the OCS Act as amended, grants the Director the authority to require "a lessee or permittee conducting exploration for development or production of oil or gas" to provide access to all data and information and to provide copies upon request. However,

section 26(a)(1)(C) of the OCS Act mandates that whenever such information is provided to the Secretary, the Secretary shall reimburse reasonable costs of reproducing, and processing.

The Conference Report which accompanied the Act stated:

The conference report follows the House provision but with an amendment to conform it to existing regulatory requirements, 30 C.F.R. 251.13. Thus under the conference report, a permittee is to be fully compensated by the Federal Government for reproduction costs. In addition, he is to be compensated for any processing or reprocessing, specifically requested by the Secretary and not otherwise prepared [sic] in the normal conduct of business. If processing has been done by the permittee in the normal conduct of his business, the Secretary must pay the costs attributable to processing or reprocessing of data and information at the "lowest rate available to any purchaser for processing such data and information."

H. Rep. No. 95-1474, 95th Cong., 2d Sess. 119, reprinted in, [1978] U.S. Code Cong. & Ad. News 3124.

The intent of this language is unmistakable. Lessees and permittees shall not be required to pay the costs incurred in reproducing, or processing data and information requested by the Secretary. AGD, therefore, suggests that sections 250.34-1(m) and 250.34-2(n) of the proposed regulations be amended to comply with the Act by deleting the phrase "at no cost to the lessor" from each section, and by adding to each section an indication that such costs will be reimbursed in accordance with the requirements of section 26(a)(1)(c) of the OCS Lands Act Amendments of 1978.

Similarly, the proposed regulations would require lessees to submit an additional number of copies of proposed exploration plans or development and production plans for the Director to transmit to state and local entities. §§ 250.34-1(b)(1) and 250.34-2(b)(1). These sections call for submission of information beyond the requirements of the Act. The cost of reproducing this data and information must be dealt with in accordance with the provisions of section 26(a)(1)(C) of the amended Act. AGD suggests that the proposed rules be amended to reflect the Secretary's obligations under this section of the Act also.

AGD's suggestions here not only comport with the specific language and intent of the OCS Act, but also ensure that those who benefit most from these programs pay the cost.

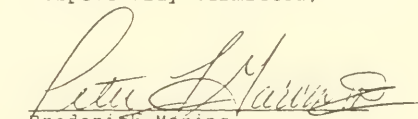
C. Liability for Interpreted Information Submitted by Lessees in Good Faith

Section 26(a)(1)(B) of the OCS Lands Act Amendments of 1978 provides that if an interpretation provided to the Secretary "is made in good faith by the lessee or permittee, such lessee or permittee shall not be held responsible for any consequence of the use of or reliance upon such interpretation". P.L. No. 95-372. Information requested in exploration plans, or development and production plans is not excluded from this section's protection. However, the proposed regulations do not include a provision which would afford protection to interpretations submitted to the Secretary pursuant to part 250. Therefore,

the proposed regulations should be amended by adding to part 250 language which provides that a lessee or permittee shall not be held responsible for any consequence of the use of or reliance upon interpretations submitted by the lessee or permittee to the Secretary under the requirements of part 250. This action would ensure the protection guaranteed by the Act. It would also serve to prevent any chilling of the desire for full and frank disclosure which might be caused by fear of unpredictable and potentially massive legal liability for good faith efforts to assist the government in interpreting and analyzing relevant data.

AGD appreciates this opportunity to provide these comments on proposed part 250 and strongly urges inclusion of the suggestions outlined above in the final version of part 250.

Respectfully submitted,



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Dated: March 16, 1979

ASSOCIATED GAS DISTRIBUTORS

Baltimore Gas and Electric Co.
Bay State Gas Co.
The Berkshire Gas Co.
Boston Gas Co.
Bristol & Warren Gas Co.
The Brooklyn Union Gas Co.
Cape Cod Gas Co.
Central Hudson Gas & Electric Corp.
Chesapeake Utilities Corp.
City of Holyoke, Mass., Gas & Electric Dept.
City of Westfield Gas & Electric Light Dept.
Commonwealth Gas Co.
Concord Natural Gas Corp.
The Connecticut Gas Co.
Consolidated Edison Company of New York, Inc.
Delmarva Power & Light Co.
Elizabeth Gas Co.
Fall River Gas Co.
Fitchburg Gas & Electric Light Co.
Gas Service, Inc.
The Hartford Electric Light Co.
Haverhill Gas Co.
Long Island Lighting Co.
Lowell Gas Co.
Manchester Gas Co.
Lynchburg Gas Co.
New Bedford Gas & Edison Light Co.
New Jersey Natural Gas Co.
New York State Electric & Gas Corp.
Northern Utilities, Inc.
The Pequot Gas Co.
Philadelphia Electric Co.
Philadelphia Gas Works
Piedmont Natural Gas Company, Inc.
Providence Gas Co.
Public Service Company of North Carolina, Inc.
Public Service Electric & Gas Co.
Rochester Gas & Electric Corp.
South County Gas Co.
South Jersey Gas Co.
The Southern Connecticut Gas Co.
UGI Corporation
Valley Gas Co.
Washington Gas Light Co.

Testimony
of
Mayor John A. Markey
New Bedford, Massachusetts

I thank you for this opportunity to testify. The City of New Bedford has testified on a number of occasions before Congress in respect to OCS activities. We are the largest commercial fishing port in the Northeast, and consequently we have a particular concern with OCS legislation. At the same time, we are an economically depressed City, and consequently have a need that must be provided for. We hope our contribution will prove to be of value to you, especially at this critical time when the process still permits input into the Act and the Regulations. Because of the critical needs of the time, both locally and nationally, I shall comment at length in order to justify our point of view.

In order to comment on legislation and regulations, one needs a framework to formulate policy and determine priorities. This perspective will help us specify the conditions that are necessary to attain our ends and achieve our goals, and thereby guide us in reviewing legislation and amending the implementing regulations. We shall develop at length a point of view in order to justify priorities which we shall use in our criticism of the legislation and the regulations. The issue is to find the right balance between development and the environment. We believe that the balance is attainable such that development can occur expeditiously without sacrificing the environment.

Since we are becoming increasingly reliant on imported oil* with the consequent effects on our

*Oil imports are projected to increase from 45% of total supply in 1977 to 57% by 1983, then decline to 51% by 1990. Most of these imports will continue to be supplied by OPEC countries. (Exxon, "Energy Outlook," 1978-1990). Shell makes similar projections ("Offshore", April, 1979, p.94; R. Nantz, OCS Testimony, Dec. 1978.) We cannot go on indefinitely increasing our imports even at a modest rate. After 1990 the risk and economic burden may well become excessive. (J. Lichtblau, "U.S. Oil Imports in 1985 - Cost, Security and Availability", Petroleum Industry Research Foundation, N.Y., 1976, p.17). Indications are that by the mid-1980's, the nation could be twice as dependent on imported energy as now. ("The U.S. and International Energy Issues", Comptroller Report to the Congress, 1978, p.ii.).

According to Hubbert, the rate at which oil has been discovered by drilling has fallen drastically. From 1860 to 1920, the average amount of oil discovered per foot for each 100 million feet of exploratory drilling in the U.S. was 194 bbls, which rose to a maximum of 276 bbls per foot, and then underwent a precipitate decline to about 35 bbls per foot by 1965. (M.K. Hubbert, "Survey of World Energy Resources", Perspectives on Energy, OUP, 1975.) According to the CIA, "International Energy Situation, Outlook to 1985", 1977, projected world demand for oil will approach productive capacity by the early 80's, and substantially exceed capacity by 1985. Increasing world demand and uncertain oil production in the major consuming countries will result in increasing reliance on OPEC oil. The Arabian-Iranian Basin contains more than half of the known recoverable oil in the world, having 76% of the super-giant fields. (R. Nehring, "Giant Oil Fields and World Oil Resources", Rand Corp., prepared for CIA, 1978, p.viii).

In respect to New England's regional needs, from 1972-1974 New England reduced significantly its per capita energy consumption under the national average, and in 1974 the per capita net energy consumption was 27% lower than the national average. But its energy prices were 30% higher for 1974. In 1975 New England imported over 98% of its major energy resources from other regions of the United States or from foreign countries. New England relies much more on petroleum than the U.S. (natural gas and coal). 80% of the energy used in New England in 1976 came from petroleum, while for the U.S. it was 47%. Of the petroleum used in New England over 34% was from direct foreign imports. But since most of the petroleum products consumed in New England are purchased from domestic sources and

balance of payments,* and since prices are approaching points such that the basic costs of the common household are extremely difficult to meet, then these needs dictate a perspective which says that development of our energy resources is a major priority. The

refined from foreign crude, New England is dependent on foreign sources for over 80% of the petroleum used in the region. The dominant use of oil and location at the end of the 'pipeline' make the region extremely insecure to shifts in petroleum policy. (E. Kaplan, et al, "The Energy Situation in New England", National Center for Analysis of Energy Systems, Brookhaven National Lab., N.Y., 1976, p.1,5,11,31. The New England Energy Congress, "Preliminary Report", Tufts University, 1978, p.27.)

*In passing, we may note that for this interim period of fuel dependence, the attempt to make our economy independent of foreign sources is in vain, unless of course there are major finds, and even then there would be a significant period of time when we would be dependent. It seems to us that the only approach is to try to make some kind of economic arrangement or quasi-federation with some major suppliers. Since oil and gas are interim fuels, since the OPEC profits can only be maximized in western economies by investment, and since Eastern suppliers know that the west has vast coal resources as well as the technology to develop alternate fuels, then they may be open to an arrangement whereby their economies will benefit from the long-term fuels. It may be worthwhile for the DOE to study this alternative despite the vast cultural differences of the suppliers of the east. We see no other alternative short of outright intervention, a very undesirable option. Another possibility is the Strategic Petroleum Reserve (SPR), but whose effectiveness is interim and only limited to price, not supply

nation is vulnerable, the average person, especially the low and moderate income are acutely vulnerable, not to mention those areas of the nation which suffer difficult periods of winter.

Energy, unlike other resources subject to the market forces, is the basic resource determining the production of every other substance from potatoes to shoes. The rise in OPEC prices did not make other sources of energy economical. Though the cartel was an initial and still continuing factor in determining price, it is now obvious that the market is governed by a decreasing supply. This supply is necessary to develop alternative sources. In the North Sea,* the cost of developing an oilfield nearly doubled in one year. Though we want lower prices, surely we do not

*See, "No. Sea Petroleum Operations in the United Kingdom and Norway", Ad Hoc OCS Committee, House Report 80-869, 1976, p.18.

want the corresponding increase in consumption which will only accelerate the depletion of the resources. This is unavoidable, and it would be followed by price increases of an intolerable magnitude. As the supply of oil and gas decreases, its replacement must not only take on the increase in consumption, but it must assume the current rate of consumption. I cannot emphasize the gravity of the situation.

Though there may be available resources in the distant future (e.g. solar, nuclear), nonetheless they cannot substantially cover us in the interim period. This period has to be extended as far as possible in order to provide the time to determine if future fuels can be developed to provide a substitute fuel to sustain a technological and industrial society.* Some may even challenge that kind of society, advocating a return to a post medieval pre-industrial society, citing this as a necessity, since low-cost fuels in large quantities are necessary to sustain an industrial society. Hence our priorities are out of order and

*Thus a "Marine Hydrocarbon Reserve" can only be justified on a limited basis, for the need is now. The most appropriate method for a reserve seems to be the SPR. (See Testimony, R. Corvin, Scenic Shoreline Preservation Conference, Inc., Washington, D.C., House OCS Committee, Dec. 7, 1978, p.1, "Marine Hydrocarbon Reserve Study Act"). The problem of a reserve in place is economical. How do we accurately inventory and partially reserve the resources without the government assuming exorbitant costs, yet providing us with fuels at this time. One solution may be a selection and banking of discovered resources, comparable to the capacity of the SPR. The problem then is one of delivery since the wells will not produce at a rate comparable to the rate of a ready-made reserve. The only way would be a very large number of wells whose rate of production would meet a large immediate need. But this is extremely impractical, earmarking too many discoveries for this purpose. Another difficulty is that it would dampen, if not eliminate, any incentive to develop the resources by the industry.

our preparations misdirected.* Though the ultimate resolution of time may end in this point of view, nonetheless it is completely inappropriate at this

The industry could only be assured if the government was willing to assume the exorbitant costs of a return on investment for the resources which are discovered, as well as to assure them that they would not be restricted in the development of alternative resources. A merit of this would be that the industry could concentrate on developing the alternative fuels. And it would provide us with an importer's bargaining position. The only way to fight a cartel is with one. The potential of a buyer's boycott of a year or so is a credible deterrent. Thus we would import more than our consumption and store it, overdevelop present fuels but underproduce them, explore and develop extensive new fields but not produce them. According to Devanney, if this threat to the OPEC cartel were to keep the OPEC price one dollar less than it would otherwise be, it would be worth spending over \$40 billion now to achieve this capacity (J. Devanney, "World Energy and the Oceans, Key Issues in Offshore Oil", MIT, 1974, p.13-14.) The major shortcoming of this solution is that it does not change the volume of supply. It is based on laissez-faire principles in respect to a resource that is primarily based on national boundaries (& not ours). And the massive restructuring of an industry would make it unwelcome, if not impractical, especially when that industry is primarily centered in a region which has been placed under considerable restraints and undergone strong criticism in respect to expansion. Only with a sharp change in attitude and appreciation of its contribution, could there be the trust to willingly undertake this radical change in policy.

Another concern, though, is that the extremely large return on income from oil and gas is regionally centered, shares in the use of the resource, and consequently most states contribute to and support a minority of states. To an extent this is unavoidable, but it is even more unavoidable if the remaining states deter OCS development as well as not permit the industry to branch out into alternative fuels. The surest way to distribute income is to permit industries entrance to areas beyond their borders, when those areas can provide something unique, e.g. those states that specialize in technology.

*See Journal of the Post-Industrial Age, England, any issue, but esp. April, 1976, see P. Bunyard, "The Future of Energy in Our Society".

time to let this weaken our resolve in the interim period, since it is unknown what the outcome will be. There is no doubt that our kind of society has provided substantial benefits to mankind, namely communications, health, science, and a closeness of cultures. Though it can be criticized, it is not as technological, but in areas that are common to other cultures. It is in these areas, motives and attitudes, (which determine the way in which technology is used), that any criticism has to be made.* It would seem then that there is no choice but to develop interim fuels, not being unmindful that the outcome may be different, and that as it becomes clear that this goal cannot be attained, then preparations can be made to make the transition into another way of life.

The only fuels at the moment which can provide interim supplies are fossil derived - oil, gas and coal. Though the latter is in abundance, further processing development seems to be necessary in order to assure a clean use of this fuel, if it is to be extensively used. To repeat ourselves, a problem with coal or any future source, is that it must take over the dwindling resources and at the same time gradually assume the current rate of consumption, as well as meet increasing total capita needs. There is an inverse proportion between an existing resource and its future replacement.

*Without the prior mentioned benefits of technology, the alternative, ultimately, could be a movement to disease, parochialism and even some forms of superstition. Though it is a very desirable end to return to the natural, it must be done in a way where knowledge can play a role such that it actualizes the potential of the natural. Such an actualization need not be exploita-

Consequently, the present circumstances dictate that our oil and gas resources be rapidly developed, while at the same time revenues be earmarked for research into the future fuels so that a determination can be made whether they can sustain an industrial economy.*

"Thus, for the long pull, there is a real need for the commercial development of new energy sources at competitive prices. Given the likely lead time, we must start now...", J. H. Lichtblau, "U.S. Oil Imports", op.cit., 1976,p.17.

tive (a criticism which indeed can be made of a technological society) and it should continue to make available substantial benefits from resources, but which are now ordered and cycled to supplement, develop, and maximize those that are renewable. This is the challenge we face, but we don't face it by running away from what is needed to carry us to it. An uncritical kind of naturalism will only present a new set of problems without the mentioned benefits. What is really needed is a re-evaluation of our motives, and then this is a concern across the board for all societies.

*The DOE might wish to commission a study to explore to what extent an industrial economy can be maintained with less supplies and more costly fuels. At what point of supply do fuel costs begin to be beyond the reach of the majority of people, and at what point in time will this occur. And will alternative fuels be available at this point in time. If not, what resources will be available to meet the demands of basic needs, and will it necessitate the restructuring of society to satisfy the demand. Maybe the banking of fuels in a SPR storage program for select uses (health, communications,etc.) as opposed to intensive energy demands, could carry us for a considerable period of time without necessitating an industrialized economic base.

At the same time, coal should be phased in with the concomitant research to determine whether it can be extensively used. Either that or at some point in the not too distant future, a hard decision will have to be made to determine whether to and to what extent to sacrifice our environmental safeguards in order to have coal as an available and common fuel. An option that has not been fully explored, but which may remedy some serious deficiencies of coal, is to have our firing-base mechanisms adaptable to a variety of fuels, so that a cyclical mix of fuels can be used in order to provide periods of time whereby the air can be cleaned. Also, varied resources could then be used in the event of disproportionate available supplies over time. A cyclical mix of resources as well as of the means to use them can provide large gains. The resources should not be seen as competitive but to be used in balance so that the environment will not be affected consequentially, as well as maximizing the renewability of nature.

Conservation is important, but it is limited. There are two approaches, one with definite limits, the other more radical in its demands, but with more gains. Efficient use of materials can reduce waste but there are limits. Beyond so many inches of insulation, there is no return. The other approach is more drastic, such as restricted travel, individual quotas, elimination of air conditioners except at

select facilities, etc.* The comparison with European countries, where per capita energy consumption is much lower, indicates that significant gains can be achieved.** But even though this will provide gains, nonetheless, as long as our society is structured so that homes are distant from urban centers and places of employment, then there will remain the need for travel; and as long as we live in an industrial economy, and though non-intensive energy facilities are favored, there is a limit. Though the per capita need for fuel will decrease through conservation, given a population that continues to grow in an industrial society, which by its very nature is energy intensive, there still is the need for additional fuels. Both sides of the coin have to be pursued. Both are interim measures, one decreasing our per capita use, the other increasing the supplies to meet the total per capita increase. Both should not be seen as mutually exclusive, but rather as

*If these means are necessary, preferably it should be done voluntarily by the use of guided market forces.

**R. Goen & R. White, "Comparison of Energy Consumption between W. Germany & the U.S.", FEA, 1975. W. Germany uses only half as much energy per capita as the U.S. Per capita energy use for transportation is one-fourth that of the U.S., residential heating (climate corrected) one-half, for other residential uses one-fourth, and for industrial uses, 58% of the U.S. The U.S. uses at least 40% more energy for industry in relation to output as W. Germany. The total energy use in the U.S. relative to national income is about 50% greater than W. Germany.

two measures to cover us in the interim period. It is unfortunate that advocates of each side of the coin ignore and even criticize their counterpart.*

Given the major priority of oil and gas development, there is one limiting factor in respect to the offshore development of these resources. And that is whether it be a threat to the renewability of marine life. It is obvious that the priority is with a renewable than nonrenewable resource. Though we consider the effects on the human environment, on other use of the environment (e.g. fishing), on coastal areas, on onshore communities - as important, nonetheless they are for the most part, within tolerable impacts and not of a kind to prevent development. Their consideration is one of making arrangements to minimize impacts and conflicts, and consequently the process may be delayed, but not curtailed. However, any development that is a threat to the species, whether the reserves be voluminous or not, constitutes a major Federal action. It is our opinion that this is the overriding concern.

Let us consider in detail some environmental

*Conservation is not new to the industry. "...the value of petroleum discoveries to the people of the U.S. was enhanced by state conservation laws which regulated production in such a manner as to prevent waste & to make more oil available when it was needed in a national emergency", Basic Industries in Texas and No. Mexico, Latin-American Studies IX, Conference of the Institute of Latin-American Studies, Univ. of Texas, 1949, p.123.

aspects, for we consider this area to be of cardinal importance. It will help to put in perspective our developmental needs with our environmental concerns.

We shall follow the subsequent order. To note some major shortcomings in the current evaluations of the environment and consider areas where intensive fish and oil activity have occurred to note whether the impacts have been substantial, whether nature has indicated that it has the resilience to continue functioning in an abundant manner. To make an evaluation of the effect of OCS development on the environment, after which we shall comment on the Act and Regulations, directing our comments in terms of the perspective we have established.

GULF OF MEXICO

In general, we are mystified at the complete lack of consideration given to the historical experience in offshore waters. There are a number of areas where intense offshore oil activity has occurred over a period of time where there also exists intense fish activity. The period of time is sufficient so that measures of unavoidable long-term harmful effects should be apparent. Consider the Gulf of Mexico. The Gulf of Mexico is a semi-enclosed basin with a surface area of almost 600,000 sq. miles. On the north and east sides, the continental shelf makes up 22% of this area and is covered by waters less than 100 fathoms. The continental slope, between depths of 100 & 1700 fathoms, covers 20% of the total area. A major current, the Loop current is the central current to explain circulating patterns in the Gulf. It moves clockwise &

transports one third the volume of the Gulf stream at rates of one to 4 knots, exiting through the Florida straits. The waters and circulation patterns are major influences on the weather for a large portion of the U.S., as well as Central America.

The coastal wetlands, estuaries and other aquatic areas of Louisiana are a product of 50 centuries of the building process of the Mississippi River. It is a dynamic biological and physical system in which change has occurred and will continue to occur.* Its outfall into the Gulf provides the shelf with nutrients which make the area a prolific marine habitat.

The development of the wetlands was gradual, based upon a balance between the fresh water river, the saltwaters of the Gulf, varying fluctuations in sea level and sedimentation of the Mississippi River. A consequence is that the area is not only a prolific marine habitat, but an area laden in minerals. The Gulf of Mexico is an enormously productive fish and wildlife area. The waters over the outer Continental Shelf and Coastal Zone of the Gulf of Mexico comprise, produce or sustain:

1. The 2nd largest estuarine area on the North American Continent.**
2. The 2nd highest fishery production in the world.***

*"A Summary of knowledge of the Eastern Gulf of Mexico", Institute of Oceanography, Univ. of Fla., 1973, pt.II, Sec.A,B,E (19).

**Ibid, p. IV-36. The entire coastal wetland ecosystem - barrier beaches, tidal flats, mangrove areas, saltwater & freshwater marshes, including the sea--all interact to provide wildlife the essential elements. Estimates of the value of the wetlands in terms of fishery production are from \$200 to \$500 per acre. To capitalize this at 5% over a 20-year period yields \$7,980 per acre for fishery production alone. The La. Wetlands comprise 8.5 million acres (see below). On this basis, the La. swamps are worth 67.83 billion dollars.

***Ibid, p. IV-1. As authorized as the source is, no basis for the ranking is given. In terms of potential fishery catches, the Gulf of Mexico is the 10th largest in the world. It is the 8th

#3 - More than 30% of the U.S. total fishery harvested during the past 7 years (1968-75), exceeding 40% in 1971 (La. Rank for U.S., 1975-1977: catch, #1; value, #3.*

Largest in the western hemisphere for catch. On a volume per unit area basis, it is lower, though still high. Gulf, 18-40 Kg/ha; New England, 60 Kg/ha; North Sea, 55 Kg/ha; Nova Scotia, 52 Kg/ha; Mid-Atlantic, 50 Kg/ha; Newfoundland, 36 Kg/ha. For pelagic species, it is higher: Gulf, 16-32 Kg/ha; North Sea, 38; Mid-Atlantic, 33; Nova Scotia, 29; New England, 21; Newfoundland, 18. See Attachment #4, Potential yields. The phytoplankton level is lower, see "Summary of Knowledge of Eastern Gulf of Mexico", pt. III, Sec. E; pt. IV-1. Many stocks are underutilized (IV-2). Florida's stocks are only at 5% of their potential (IV-9).

*Fishing has increased substantially since 1947, the year that offshore oil development began. See Attachment #1, Gulf of Mexico Fishery Statistics. Undoubtedly, in large part, this is due to an increased fishing effort and a new market in the 1950's for menhaden. Though there are differences of opinion on this matter the evidence seems to point to an increase in catch per unit effort. For example,

"It is interesting to note that the fish catch in the oil producing area of Louisiana has increased materially over the past 30 years. Fishing effort in the Gulf remained somewhat constant over the last 10 years..."

Dr. Carl H. Oppenheimer (A marine authority with 25 years of experience in the Gulf), DOI Public Hearings for Lease Sale, August 23, 1972. According to Nugent Brasher, Jr., fishing per unit catch has increased for both personnel and vessels. See statistical tables, p.27-28, and also p.17: "Fishing and the Offshore Petroleum Industry", Lafayette, La., 1973. According to 'Sum, Eastern Gulf' (op.cit.), "...the trend for all Gulf coast states shows that, although the number of vessels is not increasing by any appreciable amount each year, the tonnage more than doubled between 1959 and 1969". (IV-12).

In respect to menhaden, despite recent catches, the catch per unit effort is not increasing significantly. (IV-26). According to our cursory examination of the data for 1945 and 1969, catch per unit vessel increased by a factor of 1.94 for the Gulf, but decreased by 0.77 for La.; the catch per fisherman for both the Gulf and La., increased, respectively, by factors of 3.7 and 3.5; for 1945 to 1956, the period before menhaden catches rose sharply (c. 1956 to 1960, from 400 to 1,000 million lbs.) the catch per unit fisherman increased by a factor of 2 for both the Gulf and La.; from 1961 to 1969, when menhaden landings were constant, catch per vessel for the Gulf increased by a factor of 1.3, while it declined by 0.7 for La.; but catch per fisherman increased by a factor of 1 and 1.2, respectively, for the Gulf and La. (Fishery Statistics in the Gulf States, Sum, Eastern Gulf, op.cit., pt. IV, Ch. A). But catch per unit effort for shrimp has not increased. In 1950, 2,819 vessels landed 77,835,000 lbs., while 14,500 vessels landed 87,000,000 lbs. in 1972. There has also been a shift from one species to another (from white

to brown shrimp). Shrimp is at maximum yield in traditional grounds, but other species are underutilized. Another species affected by development are oysters. Though the annual poundage is about the same as in 1950, the yield per acre has decreased substantially (1972 yield per acre was almost 10% of the 1945 value). The cause of the declines of the latter two were due to uncontrolled dredging with the consequent varying of the delicate salinity levels. But for oysters, hurricanes can and do inflict significant damages. (Sum). Oil spillage however, has not affected oysters in La. (Mackin). See "Petroleum in the Marine Environment", National Academy of the Sciences" Washington, D.C., 1975, p.89-90; "Investigations of Commercially Important Penaeid Shrimp in La. Estuaries", La. Wildlife & Fisheries Commission, Technical Bulletin #8; Sum, Eastern Gulf, op.cit, p.IV-3, IV-33; J. Mackin and S. Hopkins, "Studies on oyster mortality in relation to natural environments and to oil fields in La.", Publ. Inst. Marine Science, Univ. of Texas, 1962, Vol. 7, p.1-126 (Mackin is the authority on oysters). Undoubtedly, uncontrolled petroleum coastal development was a significant cause of the changes - to gain access to the wetlands for exploration and to lay pipelines. There are more significant causes which affected the drainage system that varied the saltwater levels in the deltaic estuaries. They are: the confinement of the Mississippi River to a few channels discharging into the outer continental shelf; the control of the flow of the river with a series of dams upstream on some of the significant tributaries, with an extensive system of levees downriver to reduce flooding; the intracoastal waterway, constructed to accommodate shipping, further inhibits natural drainage, along with agricultural drainage and clearance. The causes were mostly mechanical and in inland coastal areas. According to "Sum, Eastern Gulf", op.cit. the causes of estuary damage are: land-fills, drainage, water diversion, and industrial and domestic waste. (pIV-3). There is no denying the effects of this development, but besides the shipping, the channels have provided access to hunting and fishing areas within the coastal wetlands, which previously were inaccessible to fishermen, sportsmen, and the harvesting of fur bearers. The rank by regions & states for catch & value (thousands), 1977:

<u>Regions</u>		<u>States</u>	
<u>Pounds</u>	<u>Dollars</u>	<u>Pounds</u>	<u>Dollars</u>
#1 Pacific Coast (1,776,968)	Pacific Coast (650,519)	Louisiana (917,523)	Alaska (326,245)
#2 Gulf (1,476,392)	Gulf (414,685)	California (874,376)	California (194,957)
#3 Chesapeake (668,843)	New England (202,786)	Alaska (644,014)	Louisiana (137,936)
#4 New England (581,247)	Chesapeake (86,138)	Virginia (608,444)	Texas (134,237)
#5 So. Atlantic (345,315)	So. Atlantic (71,726)	Ma. (317,292)	Ma. (114,017)

- #4 - A marine sport fishery involving more than 2 million fishermen in 1970, and resulting in a catch estimated to be in excess of 300 million pounds annually since 1960.*

*W. Gusey (below). Also, Summary, Eastern Gulf of Mexico, op.cit., p.IV-1. Estimates indicate sportfishing may be 1/3 to 1/2 the volume of commercial landings, and expenditures probably equal or exceed the total commercial value (IV-1). Permit some review of species similar to our area. We shall go into detail on this species and in other sections as well, since our interest is to determine the impacts on demersal species. This species is common throughout the world, and an important stock in Georges Bank and the No. West Atlantic. The Gulf has a variety of flounder caught by the bottomfish fishery, though not in large quantities (it is a local delicacy). Flounder - Opellated, Mexican, Fringed, Gulf, Southern, Shoal, Dusky; Sole - Lined, naked, (Roithmayr, "Industrial Bottomfish Fishery of the Northern Gulf of Mexico, 1959-63", Fisheries Report #518, DOI, 1965, p.22). Flounders were of some commercial significance in Alabama, ranked #4 by total poundage for 1975. The source compares Ala., Fla., and Miss. In part, due to the short coastline, Ala. total landings (6%) were low for the 3 states. Of 33 species caught by the 3 states, flounders ranked: 13th for Miss., 17th for Fla. Roithmayr did not list any poundage for flounders off La. since it was not significant. But in 1970, excluding menhaden and unclassified species, flounders ranked #3 of 22 species for total landings (438,641 lbs). Of the 22 species, spotted seatrout was #1 (775,211). (C. Wade, "Survey of the Ala. Marine Recreational Fishery", Ala., Marine Resources Division, Dauphin Island, Ala., 1975). According to E. Smith (Pers. commun.), NMF, Pascagoula, Miss., flounder is an incidental catch. Their 'Fluke' is similar to flounders from Georges Bank. It is shorter and heavier, but similar in taste. OCS rigs have not affected their number. The Gulf has a variety of flounders but not in abundance (their 'Fluke' is the most abundant). The area also has bay scallops & quahogs but not in abundance, though large beds of quahogs have recently been discovered and they are currently considering ways to market it.

Texas, though, has flounder catches which are significant. The Texas coast consists of 400 miles of sandy beaches, numerous barrier islands and extensive salt and brackish marshes. It has no natural rock foundations or firm substrate other than oyster and clam reefs, and hence much of the food is provided by primary producers. The phytoplankton level of the Texas shelf is relatively rich. But in general, overall biological productivity for (So.) Texas OCS seems to be less than in the eastern Gulf of Mexico (Berryhill, below). There are about 600 to 700 species of fish common to offshore and estuarine waters. Texas has consistently had the 3rd largest fish landings in the Gulf. Of 17 significant Texas finfish, the most important commercially in order, Red Snapper, Seatrout, flounders (7% of total catch; 13% excluding Red Snapper), and Red Drum. Flounders spawn offshore, the larvae migrate to the estuaries, and return to sea to continue the cycles (NMF, General Canvas, 1972 to 1973, in Final EIS, Seadock Deepwater Port License Application (off Freeport, Texas), Office

5. Approximately 400 species of birds.
6. Wintering grounds for more than 6 million migratory waterfowl
7. 25 National Wildlife Refuges, numerous state and private refuges and sanctuaries, and one National Park.
8. Intermittent or permanent range of numerous species of fauna considered rare or endangered, including 4 species of mammals, at least 12 species of birds, 3 species of reptiles, and 1 specie of amphibian.
9. A furbearer population capable of sustaining a harvest greater than any comparable area elsewhere in the U.S.*

Further, the largest concentration of coastal and offshore oil industry activity in the world occurs in the Gulf coastal region, comprising:**

1. More than 14,000 gas and oil wells in the Louisiana coastal marshes.
2. More than 18,000 gas and oil well completions offshore Louisiana and Texas.

of Marine Environment, USCG, Washington, D.C., Vol. 1, Section 2, 1976, p.124,136,141,149; Berry Hill, USGS, "Integrated Environmental Studies, So. Texas OCS Shelf, OTC #2754, Houston, Texas, 1977, p.243.

Flounder were also important, but not as voluminous in Texas coastal bays (probably due to adult populations residing in offshore waters). Total bay landings for all species were 13 million pounds, 59.5% sportfishing, and 40.5% commercial. Southern flounder ranked 5th of 8 species and amounted to 5.6% of the total catch (commercial landings, 4%; sport, 6.7%). T. Heffernan, "Survey of Finfish Harvest in Selected Texas Bays", 1975-76, Fisheries Report for NOAA, 1977. For total landings of all species, 1977, by states, Texas ranks: catch #13; value, #5 (111,898,000 lbs, \$134,237,000).

*W. Gusey, op.cit. (This source is for #5-9. See also, "Preliminary EIS of a Superport on So. East Coastal Area of Louisiana", draft, Center for Wetland Resources, La. State Univ., Baton Rouge, La., 1972, Table 88-89.

**The first oil & gas exploratory activity in La. began in the coastal wetlands of La. in 1927. In 1937 the industry moved into the Gulf of Mexico as an extension of coastal wetland development. The first offshore well was drilled about 1 mile offshore in 1937, completed in 1938. The first significant La. offshore lease sale was held in 1945, covering more than 129,000 acres and it was in 1947 that significant discoveries were made. The first Texas offshore lease sale was held approximately 2 years later (1947) & included 378,000

3. Nearly 2,000 offshore platforms, well jackets and support structures in OCS waters.
4. More than 5,000 miles of pipeline in the Gulf of Mexico, extending more than 70 miles into the Gulf and into water depths greater than 300 feet.
5. More than 4,500 miles of canals and pipeline rights-of-way in the Louisiana coastal marshes.
6. Total production of more than 3 billion barrels of crude oil and 19 tcf of natural gas from offshore areas during the lifetime to-date of offshore operations.*

The Louisiana coastal management plan comprises about 10 million acres. The coastal wetlands, estuaries and other aquatic areas of Louisiana cover some 8.5 million acres, approximately 1/4 of the nation's total marshland area, and almost 1/3 of the total acreage of Louisiana. Swamps occupy 1.5 million acres of the 8.5 million wetlands, and the remaining acreage is made up of saline, brackish and freshwater marches. The high fishery productivity of the Gulf is due to the availability of vast quantities of

acres. For the next 7 or 8 years Texas exploratory activity was slow, in contrast with the accelerated activity in offshore Louisiana where 121 oil wells and 40 gas wells had been developed by 1953, the year of the first OCS Act.

*W. Gusey, "Petroleum Production & Fish Wildlife Resources", Sr. Wildlife Specialist Shell Oil, Houston, Texas, 1977.

nutrient materials supplied by the Mississippi River and the tidal action from the wetlands. It is estimated that about 1/4 of the wetland nutrients are flushed out into open waters by each tidal cycle. 97% of the total commercial fisheries catch of the Gulf states is made of estuarine species.*

*B. Barrett, "Water Measurements of Coastal Louisiana", Louisiana Wildlife & Fisheries Commission, 1970; G. Gunter, "Some Relationships of Estuaries to the Fisheries of the Gulf of Mexico", in Estuaries, ed. G. Lauff, American Association Adv. Science, Washington, D.C., publication #83, 1967; D. Catalano, "Louisiana's Embattled Coasts", Aquanotes, L.S.U., 1976, p.4; Synopsis Report: "Status of the Environment", from "A Summary of Knowledge of the Eastern Gulf of Mexico", 1974. C. L. Ho and B.B. Barrett, "Distribution of Nutrients in Louisiana's Coastal Waters Influenced by the Mississippi River", Estuarine and Coastal Marine Science, #5, 1977, p.173,194: "The primary source of nutrients and organic matter to the bays is the surrounding marshes...The high fishery productivity of the water adjacent to the river mouth is a result of the nutrient contribution by the Mississippi River. However, marshes play a key role in providing organic matter & nutrients to the estuaries which serve as nursery grounds for many marine species.", (p.173).

Despite the initial changes which occurred in the coastal zone, through development, the coastal wetlands continue to demonstrate an exceptional capacity for wintering waterfowl, are among the better furbearing habitats in the U.S., and continue to function as a major fish and shellfish spawning and nursery area.

The development of oil in the Gulf started from land, working itself out into the offshore waters. The potential for harm is generally inversely proportional to the distance from shore. Oil development in shallow coastal waters has a greater potential for harm than in the open waters. This is conceded by most parties. Near-shore spills are more hazardous because the oil is likely to be contained (bay), to reach shore and effect intertidal organisms, and work itself not only throughout the water column, for the water depths are shallow, but into the sediment given any turbulence and natural upwelling of the waters. The problems that existed in the Gulf were not spillage but primarily mechanical, i.e. dredging to gain access and to lay pipelines. Coastal development in Louisiana has stabilized and offshore development has been able to occur without substantially affecting a rich, varied and abundant environment.

There are dissimilarities between the Gulf and other areas, but in some ways the development of oil and gas in the Gulf has been either under more or as stressful conditions to nature than most frontier areas will encounter; and an appropriate measure of anticipated impacts should give consideration to what has occurred. Let us turn to some other areas.

Offshore oil development has occurred in other intensive fishery areas - Canada and the North Sea - and in the latter, the development of oil has been intensive. In some ways the Gulf of Mexico and the North Sea are comparable. Both are inland seas subject to industrial, urban and agricultural expansion pressures, mineral exploitation, and transportation. Their differences are related to the origin of the water masses, temperatures, and depth, although in some ways the water that makes up the oceanic portion of the Gulf of Mexico originates from the same source as that entering the North Sea from the north and at times through the straights of Dover, namely the Gulf Stream.*

NORTH SEA

But the North Sea is more directly comparable to Georges Bank. From 60%-80% of the intertidal and subtidal flora and fauna are similar to the Georges Bank. The European Boreal (northern) Region is a biogeographical unit extending from the English Channel to the North Cape of Norway. Many species that are typical of the European Boreal region are populated in the American Atlantic Boreal region which extends from Cape Cod north to the coast of Labrador. From 60%-80% of the forms in such unrelated taxa as laminarian seaweeds, mollusks, various crustacean orders, and teleost(bony) fish are common to both the eastern and western Atlantic. South of Cape Cod, in the Virginian Province, the proportion of species shared with northern Europe declines significantly.** Many of the commercial

*C. Oppenheimer, "Microorganism and Hydrocarbons in the North Sea During July - August 1975", University of Texas, Marine Science Institute, Port Aransas, Texas, in 1977 Oil Spill Conference, API, p.503.

**Georges Bank Petroleum Study, Vol. II, MIT, 1973, p.166.

species are common - cod, flounders, haddock, hake, halibut, lemon sole, plaice, redfish, whiting, dabs, lobsters, and scallops. Herring and mackerel are similar for pelagic species. What is especially common to both areas are the demersal species, a feature of both areas that is distinctive compared to other areas. Both areas, as part of the distinctive ICNAF regions they embrace (NE & NW Atlantic) are dominant in cod and haddock, which are indigenous to the regions; but the 2 regions (along with the NE Pacific) are dominant commercially throughout the world for flounder, a species common to most parts of the world. The North Sea Region (including the other areas) is 2nd in the world in total catch (demersal, large and shoaling pelagic; 13.3 million tons), while the North Sea itself (subarea) is 5th in the world for potential catches (pelagic, demersal; 3,300 thousand tons). The Georges Bank, though not capable of the catch volume of the North Sea, has a greater potential per unit area (No. Sea, 55 Kg/ha; Georges Bank, 130 Kg/ha). The ratio of demersal to pelagic is higher in the New England (& moreso in the Georges Bank) area than the North Sea.* According to sources,** both areas are very high production areas, and the Georges Bank phytoplankton level is higher than the North Sea. Spawning conditions are similar with offshore spawning, pelagic larvae, and estuarine dependence of some species common to both areas. The hydrography differs. The Georges Bank is in open waters, unlike the North Sea and the Gulf of Mexico. The North Sea is deeper and stormier, though the Banks are more turbulent. Both are influenced by the Gulf Stream.

*Gulland, "The Fish Resources of the Ocean", FAO, U.N., 1971, p.28. For supporting tables on potential yields, see Attachment #4. The potential per unit area for N. England is 60 Kg/ha. The G. Bank value of 130 is our derivation based on Gulland's criteria. See footnote, Ranking table, (per unit area). Attachment #4.

**Conversations, NMF, Woods Hole.

North Sea offshore oil exploration began in the early 60's, and the potential of the area was recognized with the initial discovery in 1964. It is now an intensive area for oil and gas operations. The total reserves, of oil, including projected estimates, are 32.85 billion bbls for the British sector, and 29.2 billion bbls for the Norwegian sector (the estimates do not include resources of the Celtic or Irish Seas),* compared to 3 billion bbls of oil that have been produced in the Gulf over the last 30 years, with estimated projections for the Gulf to be no more than what has been produced. The North Sea has some of the largest fields in the world.

Most of the reservoirs in the Gulf are small with an average of less than 2 completed wells per structure.

*"No. Sea Petroleum Operation in the United Kingdom & Norway", op.cit., p.16-17. Another & more recent estimate is the following for the United Kingdom, proven reserves, 9.6 billion bbls of oil and 50 to 60 tcf of gas; for Norway, proven reserves, 4.8 billion bbls of oil and 22 tcf; estimated recoverable reserves for the United Kingdom, 18.7 to 21.6 billion bbls. (From the Scottish Council, 1978 and Norwegian Ministry of Petroleum and Energy, 1978, in "North Sea Pipeline", NERBC, Boston, Ma. 1979, p.1-3.)

Only 4 Gulf of Mexico fields produced an average of 50,000 bbls of oil per day during 1974. More than 2,000 structures (many of which are single-well satellites) are producing from over 1,600 oil reservoirs and approximately 1,200 gas reservoirs. By contrast at least 10 fields in just the British sector will have peak daily productions in excess of 50,000 bbls, 6 will exceed 100,000 BOPD, and at least 4 will ultimately produce more than 200,000 BOPD. Although the Georges Bank (& W. Atlantic) area will be decidedly less productive, large fields and North Sea-type structures will be necessary for commercial production in the No. East in order to meet the high regional costs of development. Lastly,

"No significant spillage has resulted from oil and gas operations in the harsh environment of the North Sea, where approximately 800 wells have already been drilled.*

Though it may be too early to tell if there will be a long-term effect on marine life in the North Sea, apparently there are no signs of harm to marine life.**

The problems that we foresee for our area are those that have occurred in the North Sea. They are two-fold. Gear loss to fishermen due to entanglement of their gear with discarded oil debris. And this is due especially to the methods of fishing which are common to our area. Though otter trawling is common to the Gulf of Mexico (shrimp), the trawling doors are heavier in the No. Atlantic, demersal fishing is more active on Georges Bank, our scallop

*E. Danenberger, USGS Circular #741, "Oil Spills, 1971-75", Gulf of Mexico, OCS, 1976, p.30-31; "North Sea Petroleum operation in the United Kingdom and Norway", House OCS Committee, 1977, p.16-17, Appendices. The exception is the spill in 1978 which was controlled.

*C. Oppenheimer, op.cit., 1977.

method of harvesting is also heavier (and non-rolling) and the sediments do not lend themselves to bury discarded debris, unlike the fine alluvial sediments of the Gulf.* We do not believe the occurrence of this conflict will be extensive, and the legislation is designed to cover the losses, both material and time.

The other problem is that of onshore impacts, which is only meaningful if large volumes of oil and gas are found.** According to current estimates for the Atlantic, this should not occur, since the estimates are substantially lower than in the North Sea and in other areas of significant finds. But

*See p. 57, R. Black, "op.cit", p.30,37; see pg.89, L. Massey, "op.cit.", p.2; see J.A. Posgay, "Sea Scallop Boats and Gear", Fishery Leaflet #442, U.S. Fish & Wildlife, Woods Hole, 1957, p.5. The scallop method is called a dredging operation. Two dredges are simultaneously used and the standard dredge is 11' in width, & weighs about 1,400 lbs. when empty. But according to Hathaway-Braley Machinery (Fairhaven, Ma.) Pers. commun. manufacturers of scallop dredges, current dredges range from 10' to 16', and weight from 1,500 to 2,500 lbs. The small boats use the 11' and 13' width dredges, which weight about 1,200 lbs., while the big boats use the 15' dredge, which weighs 2,000 lbs. If one includes the full rig, the chain bag, then the larger dredge weighs from 3,000 to 3,500 lbs. Trawl doors range from 700 lbs to 2,00 lbs, with most exceeding 700 lbs and about 11' in length. (R. Black). According to Paul Saunders, Director, Harbor Development Commission, the trawl doors range in weight from 300 to 3,000 lbs for vessels 30 to 130 feet in length. The largest boats in the New Bedford fleet are in the 100' range with doors averaging 2,000 lbs. (Boston has the 130' vessels.)

**For the landings and employment in the fishing industry of the North Sea, see Attachment 2. Landings have been constant in the Scottish sector but there have been declines in fish landings for select demersal species, as well as employment displacement in the North Sea. The decline in fish is attributed to overfishing, a problem similar to our area, the result of multi-national exploitation. Though offshore oil development had some effect on fishery employment, most of the reasons appear to be attributed to other causes. An important reason for the displacement of landings from Aberdeen to Peterhead is attributed to labor problems. (Pers. commun., Office of International Fisheries, NOAA, Washington, D.C.). But what is significant is the volume of oil. The displacement of employment can be a function of the size of

also, unlike the North Sea, there are a number of logistically located urban ports in the No. East which are underutilized, quite unlike the few large onshore bases that were initially available in the North Sea (primarily Aberdeen). We do not foresee any uncontrollable displacement of existing fleets due to OCS activities, since the urban ports have ample space. As a matter of fact, we see the development of offshore oil as an opportunity to fully develop our port, for both fish & oil interests, as well as supplementing our marine traditions.*

the find, this did not seem to occur in the Gulf where fishery employment and landings increased at the time of OCS development, though there were effects on some local ports. Current estimates for our area do not indicate this, (esp. since we are an urban center), and pale in significance when compared to the North Sea.

*Permit a postscript. The major problem in fishery areas is the depletion of stocks through overfishing, most of which occurred with multi-national exploitation in the 60's and early 70's. A clear example of this is the recovery of the stocks to almost virgin levels in the North Sea at the time of World War II when fishing was limited. (See p. 58.) With the 200-mile limit in effect, hopefully, the stocks will increase to former levels. But the classification of large areas as marine sanctuaries, though it has merit, does not seem to be an appropriate course of action. There are a number of activities (commercial & sport fishing, recreation, waterborne commerce, minerals) that can occur in offshore waters. They are under the administration of a number of Federal agencies who are authorized to regulate the activities by Federal Ocean legislation passed since 1972 - namely, the OCS Act, the Fishery Conservation & Management Act, the Marine Mammal Protection Act, Marine Sanctuaries Act, and the CZM Act. There may be need to assure that the overall purposes of the Acts and the implementing regulations are coordinated and consistently applied to assure that multiple uses will support the overall interests of the area, and at the same time minimize conflicts that can occur between uses. Consequently, there may be a need for the 4 Secretaries - Commerce, Interior, Transportation and Energy to coordinate their interests to establish major priorities for large areas that will undergo a variety of uses, to assure that no one use will pre-empt & upset a balance of uses when it appears the activities can coexist. In a sense, one can call such areas, 'Marine, Mineral & Transportation Zones', and could even define them as such mandating an authority which coordinates the Secretaries interests.

In respect to the Marine Sanctuaries Act, we feel that an area, especially large areas, should be considered for this designation if the evidence indicates a basic

incompatibility of the marine use with the other uses; or the proposed activity has a definite potential to do harm and the existing authorities responsible for managing the activity, by their Acts, will not give sufficient consideration to the interests of the marine environment, as well as not having the staff capabilities to administer their respective Acts. Otherwise, the Marine Act will assume certain priorities for an area that either exclude or subordinate activities which have as yet to be shown incompatible, and negate arbitrarily some of the Acts, namely the OCS Act. The OCS Act has been revised substantially in order to give consideration to and to accommodate other interests. The Marine Sanctuaries Act, while it has merit, unfortunately is not structured to actively coordinate a variety of activities, and is more apt to regulate by exclusion. The purpose of the Sanctuary Act are limited to preserving, restoring an area for conservation, recreational, ecological and esthetic values. Any party seeking permits, licenses is subject to the certification of the Secretary in respect to those ends. Hence other activities, not explicitly stated by the Act, have subordinate status at the start. This excessive jurisdiction has been recognized by the Congress, and thus S2767 and HR10661, amendments to the Act, propose to limit the unqualified authority inherent in the original Act. The Secretary of Commerce can automatically and perhaps inadvertently assume authority to regulate all activities within a sanctuary, and all other statutes could be superseded within the designated site (House and Senate Reports, 1978). The checks established by the amended version (currently inactive and not considered this session) are that all activities to be regulated must be specified in advance when the area is designated as a sanctuary (Studds amendment), and that any activity (permits, licenses, other authorizations issued pursuant to any other law or authority) not specified to be regulated in the implementation of the Act shall be a valid activity (though the Secretary shall monitor such). This amendment applies for any designated site larger than 1,000 nautical square miles, and for those sites the Congress shall approve or disapprove the designation. Though we believe the amended Act is an improvement, it is not sufficient since the initial designation still assumes priority status for its purposes. The first test is not to test proposed activities against that priority, but to test the priority itself for an area and one way is to measure the priority in the context of other areas, and also relative to other activities in those areas. Otherwise, since many areas are aquatically special, then it would be difficult to avoid the proliferation of sanctuary areas without being arbitrary. The Sanctuary Act is too limited in its scope, funds and staff, to assume the role of ordering a variety of interests for large areas.

In general, though, unless large areas indicate a basic incompatibility of varied interests to the marine environment, then the areas should not be classified as

sanctuaries. To begin, it can be extremely parochial, to grant the status for a large area in that there are many productive fishing areas in the U.S. and the world which could as appropriately be classified sanctuaries.

(See p.148-60, Attachm. #4.) Since these parts of the country and the world are willing to develop their mineral resources alongside their fisheries, large areas that seek the classification are simply displacing the burden of mineral needs to other areas, shifting and not sharing in the responsibility to provide critical national and world needs. Since the primary problem of offshore waters is overfishing, then the existing law and regulations are sufficient, namely the Fishery and Conservation Act with the Regional Fishery Councils. We might note that though the Act requires consultation with Regional Fishery Management Councils, the ultimate authority lies with the Secretary and it is doubtful that the Secretary will significantly confer her authority to subordinate groups with limited interests when there are other interests from coordinate cabinets to be regulated. Ultimately, it could mean the partial pre-empting of authority from Regional bodies.

In respect to offshore oil development, we see it, in theory, as capable of occurring in a Sanctuary area. As noted in the environmental section, it could even aid oceanographic and fishery interests in a limited way. But OCS development would seem to be excluded, since the Marine Sanctuaries Act was formulated as a response to the S. Barbara spill, and the brochure from the governmental office responsible for the Act, portrays OCS structures in a negative way. But our conversations with the office responsible for the administration of sanctuaries, assured us that oil and gas operations are not excluded from sanctuary areas, though special conditions could be attached, such as phased in developments. In respect to Massachusetts, Buzzards Bay is already a conservation area, and if coupled with Georges Bank, would only put the interests of the area in an extremely self-centered light. It is not a case of either-or, but the needs of the time call for management of areas in a balanced manner, not to mutually exclude the coexistence of fishing and mineral interests when the record indicates they can coexist.

SOUTHERN CALIFORNIA

Extensive OCS development has occurred in a narrow continental shelf off So. California, beginning in 1896. While it is true that there have been difficult periods, especially local and state reactions to the Santa Barbara spill in 1969, nonetheless there is a unique significance about the area which is very telling. It is the co-habitation of rich and diverse marine communities with not only OCS development, but the coexistence of this life with substantial seepage of crude oil on the narrow shelf for centuries. But let us begin with a general description of the area.

The California coast is fairly straight, with no wide banks or large bays. The largest body of enclosed water is San Francisco bay, and opposite its narrow entrance the shelf widens, though only to some 50 Km. Otherwise, the shelf is on the average about 20 Km. The California current dominates the flow of water off California. The current flows southward, to the northward tip of Baja, California to the eastward extremities of the Equatorial current system near the southern tip of Baja, Mexico. The current is about 650 Km wide and is part of the general anticyclonic gyre which dominates the North Pacific. The current, aided by the prevailing north and northwest winds, produces a strong upwelling of cool nutrient rich water along the coast. The current has a total transport about a 5th or 10th that of the Gulf Stream.

Close inshore, there is a more complex pattern, with semi-permanent eddies around the channel islands off So. California and off southern Baja, California. East of the California current the waters are turned counterclockwise by a large eddy with northern currents moving past Santa Barbara. This is the So. California countercurrent. East of the eddy, and along coastal waters off Los Angeles, the current moves southerly in a western direction along the coast of Mexico until it merges with the North Equatorial current. Fishery production is high in most of the coastal and offshore parts of the region, but lower in the oceanic waters well away from the coast. The most favorable area for fisheries is the California current.*

From 1896 to 1975, more than 1.5 billion bbls of oil and 1 billion Mcf of natural gas have been produced from California tidelands and the outer continental shelf. Proven reserves are estimated to be about 524 million bbls of oil and 187 million Mcf of natural gas. Gas production peaked in 1968, and oil production peaked in 1969. A total of 248 exploratory wells and 3,127 development wells have been drilled. Production is almost completely limited to the southern counties. In 1975, there were 15 platforms and 7 artificial islands. There are 12

*Gulland, op.cit., p.121-122; T. C. Johnson, "Natural Oil Seeps in or near the Marine Environment", USCG report, 1971, p.9-11; according to A. Mearns (Pers. commun.), there is a movement of bottom currents in a northerly direction. (See footnote, next page.)

refineries and 3 moveable drilling rigs. Of the 15 platforms, 13 are located in the S. Barbara Channel, with 6 on Federal leases, and 7 on State leases, with water depths ranging from 41' to 211' in State waters, and from 150' to 848' in Federal waters. There are 42 subsea wells. Sixty-three Federal leases remain to be developed in the S. Barbara Channel. Over 30 oil and gas fields are producing 235,000 bbls of oil per day, but production is declining.*

The southern half of Santa Barbara County, from Point Conception south into Baja, California (the area of OCS development and natural oil and gas seepage) has a warm temperate fauna, with S. Barbara as the lower southern limit of northern species from outside the area (No. Cal., Oregon). The area is an oceanographic zone called the So. California bight. In general, the variety of marine species are inversely proportional to abundance as one enters the waters north of S. Barbara. The biomass of the south is approximately one-tenth that of the north with a similar variation in the density of bottomfish. Trawling for bottomfish is not permitted within 3 miles of the coast, and though bottomfishing is active there are few demersal catches in the isolated and deep basins outside coastal waters, for the conditions are anaerobic as well as too deep for trawling (A. Mearns, Pers. commun.).**

*"Environmental Planning for Offshore Oil and Gas", Vol. V, Regional Status Reports, part 4, California, U.S. Fish and Wildlife, DOI, 1978, p.4-5, 133-134.

**Dr. Mearns, Fisheries Biologist, Head of Project's Biology Div., So. Cal., Coastal Water Research Project, El Segundo, Cal., (an expert on the effects of environmental stress on marine fish & invertebrates. Detailed studies in Arctic Ocean, Bristol Bay (Alaska), Puget Sound & So. Cal.).

Since 1912 thousands of otter trawl samples have been taken in So. California waters. In 1976, over 2,400 samples were analyzed, with contemporary surveys from 1957 to 1975 providing the bulk of samples. Sampling covered a depth from 5 to 659 m, providing data for 197 species of finfish and nearly 400 species of invertebrates. For demersal fish and invertebrate populations the catches varied nearly an order of magnitude over several years, but the number of species and diversity varied considerably less.* The variation in abundance appears to be due to 'recruitment', especially when large water masses from outside the area enter the bight (as in 72 and 73), bringing planktonic juveniles of species more common to areas north or south of the bight to settle in coastal areas.** Thus,

"The long-term fluctuations in catch parameters, particularly fish abundance and biomass, depend largely on the overall 'recruitment'...during some years large numbers of juveniles of certain species (particularly sanddabs and rockfish)...successfully settled off So. California, thus greatly increasing the average fish abundance", (p.219)***

and the causes of the

"...regional and temporal variations (which) are large...reflect differences in gear and fishing techniques as well as real differences in abundance and diversity." (p.217)***

*But the relative abundance remained stable off Orange County (San Pedro Bay), though the years 1971 to 1975 produced some of the highest catches. (See M. Allen below)

**Many demersal species had poor recruitment success in the warm years of 1959 and from 1974 to 1975. (See M. Allen, below)

***M. Allen and R. Voglin, "Regional and Local Variations of Bottomfish and Invertebrate Populations", in Coastal Water Research Project, 1976, p.217-223. Most surveys have included few samples deeper than 60 m. A recent synoptic trawl survey (1974) in depths beyond 60 m indicate large yields.

Within the bright, there are regional variations. Fish abundance, biomass, number of species and diversity increase as one approaches San Pedro Bay from the south (San Diego) and from the north (S. Barbara). S. Barbara was relatively low in diversity, number of species and abundance. However, recent surveys in outlying areas off S. Barbara have yielded the largest catches.*

*Ibid, p.217-223.

Natural seeps of crude oil in significant quantities have occurred on the narrow shelf for centuries, especially off Santa Barbara. The original pioneers noticed this. On land there existed tar pits, and a noted one is the La Brea at Los Angeles. By examining remains from the fissures of La Brea, prehistoric animals have been found which date prior to 10,000 years. Asphalt was a common ingredient of the natives, used for artistic expression as well as other means,* just as the original discoveries of oil in California by the industry were asphaltic, gummy and extremely heavy oils.** It is estimated that there are 900 individual occurrences of natural oil seeps within a 7 sq. mile area off Coal Oil Point, of which 250 are active gas or gas-oil seeps. The seeps are located along structural trends, with areas from zero to 15' of unconsolidated sediments estimated to have high seep activity. Most of the seep oil and tar from Coal Oil Point may be deposited in the trough of the S. Barbara basin. There

*C. Ventura and J. Wintz, "Natural Oil Seep: Historical Background", in Biological and Oceanographic Survey of Santa Barbara Oil Spill, 1969-1970, Vol. 1, Ch. 2, compiled by D. Straughan, Alan Hancock Foundation, Univ. of So. California, 1971; D. Dederer, "Petroleum and the American Indian", Exxon, USA, 3rd quarter, 1976, p.19-20. Spanish explorers, led by Ferrello, in 1543 on a journey past Santa Barbara on a windy day, mentioned the smell of bitumen in the air from off the coast. Captain Vancouver, in 1793, made observations about the floating oil in the sea. Gaspar de Portola, in a 1769-1770 expedition, noted the pits.

**R. Williamson et al, "The American Petroleum Industry", No. Western University Press, 1963, p.26. 54% of the Ca. crudes produced in 1904 were asphalt.

has been a decline in seep output between 1946 and 1976, which may be attributed to offshore oil production.*

Estimates of seepage from the Coal Oil Point region off Santa Barbara, (a stones throw from shore), an area which is high in seepage, are from 50 to 100 bbls per day, which ranges from 18,250 to 36,500 bbls per year.** If the seepage is slow, the oil weathers and sinks;*** if it is faster, the oil whip which is formed is torn away by the agitation of the water and floats away.****

The seeps vary in activity over a period of a few days

*For example, by Oct. of 1969 the seepage rates around Platform A sharply declined to 12 bbls per day from 50 to 5,000 bbls per day in February of the same year. See P. Fisher & A. Stevenson, "Natural Hydrocarbon Seeps Along the Northern Shelf of the S. Barbara Basin", American Assoc. Petroleum Geo., S. Barbara Channel Revisited, 1973, p.17-27. See also R. Wilkinson, "Ca. Offshore Oil & Gas Seeps", Cal., Summary of Operations, Div. of Oil & Gas, Vol. 57, 1972, p.5-28.

**A. Allen et al, "Natural Oil Seepage at Coal Oil Point, S. Barbara, Ca.", Science, 1970, p.974-977. Aerial, surface & underwater methods were used to determine the value. The State of California estimates range from 40 to 670 BPD. See "Offshore Oil & Development, So. Cal.", Office of Planning & Research, Governor's Office, Vol. 1, 1977, p.52. The USGS estimates 200-250 BPD for the S. Barbara Channel, in Final EIS -, S. Barbara Channel, DOI, 1976). See also R. Wilson et al, "Natural Marine Oil Seepage", Science, Vol. 184, #4139, 1974, p.864. The circum-Pacific area is the area of greatest seepage. It contributes about 40% of the world's total.

***H. Ludwig & R. Carter, "Analytical Characteristics of Oil-Tar Materials in So. Cal. Beaches", Journal of Water Pollution Control Board, Vol. 33, #11, 1961, p.1123-1139. Analysis of beach tars showed specific gravities just above & below the gravity of seawater. Weatherization may be the cause of the higher s. gravity.

****Tidal influence can decrease the flow rate by about 20-40% for each increase in its height. See P.M. Kolaj & J. Ampaya, "Tidal Effects on the Activity of Natural Submarine Oil Seeps", Marine Techn. & Soc. Journal, Vol. 17, #1, 1973, p.25-28. See also, T.C. Johnson, "Natural Oil Seeps in or near the Marine Environment", USCG report, 1971, p.9-11. The report also notes a # of seeps in other areas. This is not an uncommon phenomenon. "There are numerous submarine seeps which have never been detected. A likely area is in the Atlantic Ocean (between Trinidad and Barbados)".

by as much as 100 bbls a day. Most of the seeps occur in relatively shallow water. Much of the oil appears to become laden with sediment and settles to the bottom in one of the nearby basins, in particular the S. Barbara, S. Monica, or San Pedro Basins. These basins exceed 500 m in depth with sills half that deep. They are relatively isolated, and undoubtedly are a means to accumulate the oil.*

Seep oil appears to be different from nearby crude oils, even when the crudes have been concentrated by weathering or distillation. But the seep oils may not be distinguishable from the crude oils that have undergone a significant evaporation.** S. Barbara crude oil is relatively insoluble in seawater. There is a very low percentage of light aromatic compounds in S. Barbara crude oil*** and hence the toxicity is low.

*T.C. Johnson, op.cit., p.9-11.

**When compared with 'fresh' crude oils, it had fewer aliphatics (paraffins and naphthenes) and higher aromatics and ether - insolubles.

A Rosen et al, "Characterization of Coastal Oil Pollution by Submarine Seeps", Cal. State Water Pollution Board, publication 21, pt. 2, 1959. The question remains: for what oils does weatherization exclude evaporation?

***R. Kolpack, (Pers. commun.), in R. Kanter and D. Straughan, "Effects of Exposure to Oil on *Mytilus Californicus* (Ca. Mussel) from Different Localities", Proceedings, Prevention and Control of Oil Spills, Washington, D.C., 1971, p.487.

The toxicity of the local crude oil is about the same as the seep oil.* Bottom sediments collected close to the seeps contain on the average about 25 times more heavy hydrocarbons than sediments well away from the area.**

The movements of the California current and counter-current along the Eastern coastal waters off S. Barbara are such that under certain wind conditions and seasonal variations, the seeps reach shore in varying amounts.*** There is deposition on So. California beaches. Tidal action seems to work the tars in and off the beaches.****

*Pers. Commun., C. McAuliffe, Chevron, Cal.

**C. Koons and D. Brandon, "Hydrocarbons in Water and Sediment Samples from the Coal Oil Point Area, Offshore California", OTC paper #2387, 1975, p.513-516.

***See earlier description of currents. See also, "Oil Spill Trajectory Maps", Appendix VI, CALCOFI current (California Cooperative Fisheries Investigation) and strong California current, Office of Planning and Research, OCS project, California, 1976. The CALCOFI current can be identified with the counterclockwise current that turns about the islands, as well as the currents that face L.A. According to the USGS, EIS for S. Barbara, oil reaching shore should be planned for. The area from Pt. Conception to Oxnard is designated as an area subject to oil spills. The direction of movement of future oil spills are difficult to predict because "the winds at the time of the spill may be from any direction", as well as the current condition in which the spill occurs. It is to be noted that at the time of the S. Barbara spill, there was a current a few miles off shore running parallel to shore which had collected seagrass and debris, and it was preventing the slick from reaching shore. A storm broke this natural barrier causing the oil to come ashore. (See below, D. Straughan, "Biol. Studies...of S. Barbara Oil Spill," p.6.)

****R. Merz, "Determination of the quantity of oily substances on beaches and nearshore waters", California State Water Quality Control Board, publ. #21, 1959, p.1-45; see also, H. Ludwig and R. Carter, op.cit.

In a 3-year study of the S. Barbara oil seep area, the natural seeps have not affected the growth rates of marine animals in the intertidal and offshore area, and benthic species were not affected by the seeps.* According to Allen,

"Marine life, in general, was quite abundant even in the areas of concentrated oil seepage."**

But petroleum hydrocarbons were higher in the sediments and mussel tissues from Coal Oil Point than from the area surrounding 2 platforms in the S. Barbara Channel. And levels of petroleum in benthic sediments under the platforms were higher than stations recorded outside the S. Barbara Channel.*** Thus the populations at Coal Oil Point are subject to higher levels of petroleum than under the platforms. The data indicate that marine invertebrates can live and breed in areas of chronic exposure to petroleum higher than that in oil producing areas.****

*D. Straughan, "Sublethal Effects of Natural Chronic Exposure to Petroleum in the Marine Environment", API publ. #4280, Washington, D.C., Alan Hancock Foundation, Univ. of So. Cal., 1976.

**A. Allen and R. Schlueter, "Estimates of Surface Pollution Resulting from Submarine Oil Seeps at Platform A and Coal Oil Point", General Research Corp., S. Barbara, California, 1969, p.24.

***But the fingerprint pattern of oil was too broad to specify the cause, and could have originated from sources away from the platforms, namely seepage, the S. Barbara spill, or passing tanker traffic (See D. Straughan, below, p.1,12).

****This may be due to the kind of petroleum in the area. However, preliminary data from studies in offshore Louisiana indicate the same results, & consequently the adaptation may be for a variety of crude oils. (See D. Straughan, below).

It is unlikely that the species have evolved a higher tolerance level since most of the species have pelagic larvae. There is a recruitment of juveniles bred in other areas, and consequently the tolerance is acquired as the animals grow in the area. But such a process could be predicted to occur in areas chronically exposed to petroleum from manmade sources.* The level of higher tolerance is with the individual, and cannot be generalized beyond this state. (Pers. commun., D. Straughan.)

*D. Straughan, "The Sublethal Effects of Natural Chronic Exposure to Petroleum on Marine Invertebrates", A. Hancock Foundation, Univ. of So. Cal., 1977, p.1-12. But it should also be noted that not all organisms respond to petroleum and different petroleum compounds in the same manner. See also, R. Kanter & D. Straughan, "Effects of Exposure to Oil on *Mytilus Californianus* (Ca. Mussel) from Different Localities", in Conference on Prevention and Control of Oil Spills, Washington, D.C., 1971, p.485; 487-488. The data supports the view that the higher tolerance is due to an acclimation of the organism in the presence of the oil. This lab experiment indicated degrees of tolerance in terms of mortalities of mussels to S. Barbara crude oils from offshore fields: one non-seep area had high mortalities, the other less, while the seep area (Coal Oil Point) had the lowest mortality rate. But it is to be noted that the mussels were not tested with oils from the seep area, whereas in the prior paper (Sublethal Effects) the samples were tested in the natural environment, and thus the specimens from the seep area were exposed to a different variable (seep oil), but unfortunately there was no data from the platform sites. This study also tested all major groups of invertebrates. But Straughan makes reference to the McDermott-Ehrlich Study (op.cit., p 81) which studied mussels at platform and control sites. There were higher levels in the sediments at the platform site, within the range of the petroleum level in sediments in the seep area. But there were no detectable amounts of petroleum hydrocarbons in the mussels at the platform sites. (In a related study, there was no marine uptake of oil for finfish though there were very high levels of biogenic hydrocarbons in rockfish, (p. 81, J. Warner, Battelle Lab)). Straughan suggests that if the tolerance levels were not due to the crude oil composition of seep oil, then the platform exposure is an indicator that invertebrates can acquire tolerance at a higher level. What is puzzling is that the petroleum levels in sediments were

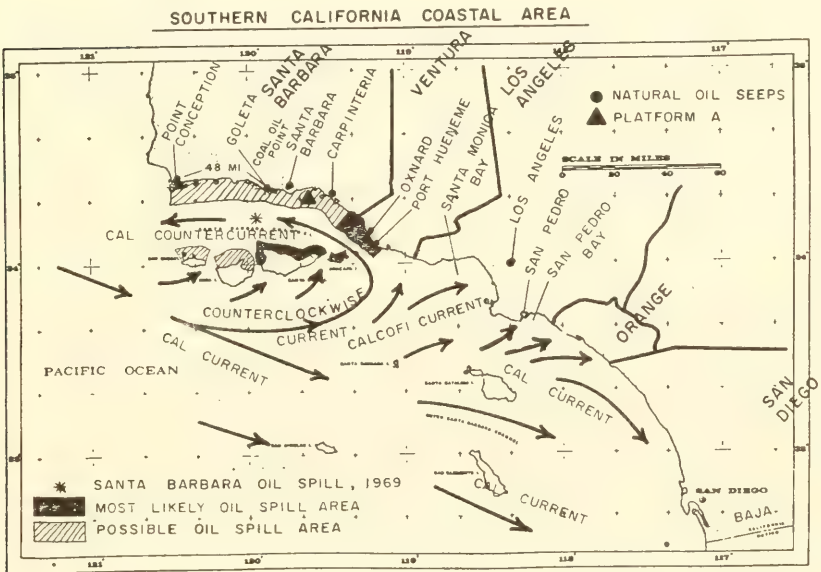
Let us consider the S. Barbara spill of 1969, but let us first describe some significant features of the area. Santa Barbara County has a population of 264,100 (1970) with 390,400 projected for 1980. It has 110 miles of coastline (islands excluded) of which 15% is open to the public, with 24 miles of rocky shores and 86 miles of beaches. There are at least 3 piers, a jetty and 6 launching facilities and 2 partyboat landings. Santa Barbara is located near the So. East corner of the county, 48 miles down the coast from Point Conception, approximately halfway between Goleta and Carpinteria,* points off

high under platform sites and within range of seep oil areas, yet there were no effects on benthic invertebrates especially when the invertebrates appear to be of comparable age to those in seep areas, thus having the same period of time to acquire a corresponding tolerance level. The difference in weatherization may be a factor with the result a greater concentration of the higher weight aromatics which exist in particulate form (McAuliffe, p. 77). Little is known on the effects of the high weight aromatics. Minimally, future research should study benthic infauna, as noted by Straughan, as well as laboratory experiments on non-platform, platform and seep area specimens with varying levels of, weatherized and non-weatherized crude oil concentrations, as well as seep oil as a variable. This research is wanting and needed.

*Eight miles south of Goleta, 10 miles north of Carpinteria.

which are the majority of OCS platforms in So. California waters. Coal Oil Point, the site of the most extensive natural oil seep, is a very short distance off Goleta.

Santa Barbara is the only major port in the county. Santa Barbara harbor provides shelter for numerous commercial fishing boats with unloading and processing facilities. Trawlers operating out of Santa Barbara land catches of rockfish, English sole, petrale sole, and other species of flatfish. Most of the flatfish are filleted and sold on the local market as fresh fish, as well as rockfish. Pacific bonito and other pelagic species, are caught in the offshore waters. Lobsters (spiny) and abalone are



Map of southern California showing the position of platform A and known areas of natural oil seepage.

sold on the fresh fish market after being processed in local plants. The state's most extensive kelp bed is located between Point Conception and Santa Barbara, and commercial boats representing firms based in San Pedro and Port Hueneme harvest the kelp for processing.* The kelp beds also serve as an important habitat for a large number of bottom fish and invertebrates. Miscellaneous fish are caught and processed as animal food.

Santa Barbara is also a popular sportfishing center supporting both party boats and skiffs that fish in surrounding waters. Major species caught are: blue, gopher and yellowtail rockfish, kelp and sand bass, white seabass, pacific bonito, surf perch, barracuda, pacific mackerel and Ca. halibut. Skiff fishing is done primarily inside the kelp beds mainly for bottomfish.**

The party boats carried from 8,000 to 12,000 anglers per year from 1965 to 1968, landing from 75,000 to 125,000 fish per year.*** It is in this environment that the 1969 spill occurred.

*The kelp is processed to extract algin, a colloid compound used in drugs, as well as for other uses.

**Namely, petrale and English sole, bocaccio and chilipepper rockfish. Halibut is caught in areas off the breakwater.

***E. Smith et al, "Coastal County Fish and Wildlife Resources", University of California Sea Grant, with Cal. Dept. of Fish and Game, 1973, rev. 1976, p.172-179.

The Santa Barbara spill began in January of 1969, soon after the fixed drilling platform A began operations. It was located about 6 miles southeast of S. Barbara and 6 miles southwest of Carpinteria, Cal. There was a natural current barrier with collected seagrass and other debris that initially prevented the oil from reaching shore. In some areas the oil was no more than a mile from shore. But a storm completely scattered the oil slick and the oil reached shore. Estimates of the amount of oil spilled vary, but from 50,000 bbls within 20 days and over 70,000 bbls in the first 100 days seems to be a reliable estimate.*

The initial and immediate effects of the spill, other than finfish, were high.** The organisms suffering the highest mortality were pelagic birds and barnacles. Mortality was at a low level or patchy in other groups. Recolonization began within 8 weeks of the spill. While little data is available on the sublethal effects of the oil, the conclusion - based on populations of plankton, fish, benthic fauna, intertidal organisms, marine mammals and birds is that the organisms have been

*D. Straughan, "Biological Studies of the Santa Barbara Oil Spill, Santa Barbara Channel Region Revisited", AAPG, 1973, p.6-7. Another reliable estimate is 33,000 bbls, "Petroleum in the Marine Environment", op.cit., p.75.
 **R. Solomon et al, "Onshore Impacts of So. Ca. OCS Sale #35", Office of Planning and Research, Governor's Office, Ca. draft report, 1976, p.vii-48.

able to withstand the effects of the 1969 spill.*

That the ecosystem was able to withstand such a high dosage of oil is probably due to the low toxicity of this oil, a possible higher tolerance to this oil in some areas, at least due to intermittent exposure to natural oil seepage, and the short-term exposure of the intertidal areas to the high concentrations of oil. This spill certainly did not have the negative impact of the W. Falmouth spill.**

However, a report filed with the Cal. Dept. of Justice suggested that the channel has not recovered from the spill. The report admits, though that barnacles and surf grass have recovered in some areas, and the Audubon bird data indicates that the pre-spill and post-spill abundance of marine birds populations affected by the spill are similar. But pre-spill data is not available for most of the organisms and thus comparisons are impossible.*** But the Bureau of Commercial Fisheries

*D. Straughan, "Biological Studies of the S. Barbara Oil Spill", S. Barbara Channel Region Revisited, AAPG, 1973, p.14.

**D. Straughan, "S. Barbara: A Real or Imagined Disaster", Institute of Marine and Coastal Studies, University of So. Cal., 1976, p.12-13.

***M. Foster, "The S. Barbara Oil Spill: A Review of Damage to Marine Organisms", submitted to Dept. of Justice, 1974, p.2, 31-32, 97.

was unable to detect any adverse effects on pelagic eggs or larvae.* Nor was there any effect on pelagic school fish.** Nor will the oil collect and remain, for the initial deposits through resuspension and transportation are being deposited in deeper water, with the net result that the basin will be the final state for most of the material.***

According to a University of California short-term analysis of the effect of the spill on macroplankton and fish, there were few noticeable effects. Most observed changes were related to the spill and correspond to climatic changes at the time. The bottom fish populations resembled their counterparts in non-oiled areas, and the larvae of common fish and invertebrates were abundant in the offshore plankton. Of all the subtidal effects examined, only the temporary disappearance of tiny mysid shrimp inhabiting the kelp canopy was a likely direct effect. There were no noticeable fish kills following

*Monthly Report, Feb., Fishery Oceanographic Center, La Jolla, Cal., 1969.

**Cal. Dept. of Fish and Game, Jan.-March, Progress Report, 1969.

***R. Kolpack, "Biological and Oceanographical Survey of the S. Barbara Oil Spill", Vol. II, University of So. California, 1971, p.343.

the blowout. The channel island sport fishery changed with seasonal trends, and probably not as a direct effect of the spill.* According to the National Academy of Sciences Report, the area was recovering well within a year.**

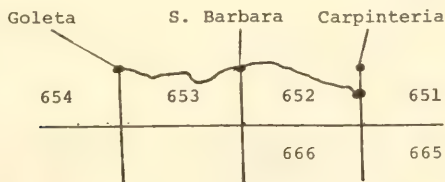
Let us provide some detail on the fisheries focussing on the years about the spill, as well as for a longer period of time to determine if OCS impacts have harmed marine life. The Department of Fish and Game, Cal., compiles marine fish and landing statistics from both commercial and sport fishing vessels. The data are summarized for ports as well as blocks, each block being approximately 10 nautical miles per side. Effort data are not generally available, though angler catch efforts are. Without effort data it is difficult to determine if the catches are due to changes in number of species or vessels, or market forces. There are many combination boats out of S. Barbara, especially the trawlers that seek different species at different times.

*EPA Report #15080, "Short-term Analysis of Macroplankton and Fish", University of California, S. Barbara, 1971. The change of the sport fishery is clearly attributable to a lack of fishing effort due to the closure of the area. See also, L. Jones et al, "Just How Serious Was the S. Barbara Oil Spill?", Ocean Industry, Vol. 4, #6, 1969, p.53-58. After the initial removal of the crude oil, one month after the spill, nearly all communities showed no adverse effects except for birdlife which suffered heavy damages.

**op.cit., p.75.

There is a continuous record of sport and commercial catch and landings for the Santa Barbara Channel. The catch for selected fisheries in the area (blocks)** where oil and gas production occur do not appear to be affected by the OCS structures. The purse seine fishery dominates the catches in the area. Trawl catches have been traditionally low except for one block (#666) where catches have been moderate. Landings from the blocks have been constant from 1961 to 1971, with a sharp drop from 1971 to 1973. The landings from 1973 to 1975 increased to about the level of catches before 1961. Block #654 includes both platform Holly and the Coal Oil Point seep area.

**Blocks are 10 nautical miles on their side, the shore's row approximately 3 miles from shore:



From 1973 to 1975 there has been an increase in the trawl fishery for shrimp and crab in this area. Landings for the ports of S. Barbara, Ventura, Port Hueneme, Oxnard and Gaviota, show an increase for 1970 and 1971, with continuing increases to 1974. Landings for Santa Barbara show a growth after 1970. Using 1969 as a base year (3,552,669 lbs), the trend follows a growth curve* of:

1969	-	100
1970	-	83
1971	-	102
1972	-	113
1973	-	205

It is difficult to determine catch effort from the data, but it does provide a long-term indication of the productivity of the channel.

It is to be noted that the figures are landings, not catch and, respectively, only for the channel ports and S. Barbara. The major portion of the catch is landed in the Los Angeles area. The figures do not suggest that a decline in production has occurred in the S. Barbara Channel. In general, sport catch and effort from 1956 to 1975 has been constant, though total effort has increased.

*Landings 1969-1973, Cal. Dept. of Fish and Game, (in Coastal County Fish and Wildlife Resources, 1973, p.184-185.) Of the species landed from 1969 to 1973: lobster, shark and swordfish landings declined, rock crab declined from 1972 to 1973, but abalone, bonito, lingcod, rockfish, seabass and miscellaneous species increased their landings, Hester (below) attributes the decline in lobster to overfishing as well as for some finfish. (For flatfish, see p.47-48.) SEE CHART ON FOLLOWING PAGE.

The S. Barbara landings are better indicators of the fishery in the area of oil and gas development. Since both total catch and angler catch-effort have remained constant, it would seem that the effects of the OCS structures have been minor. Though there was a decline at S. Barbara in 1969 following the spill, the S. Clara River flood played a large role in affecting the catch in the channel, though angler catches were not affected.

The period of time is sufficient to note whether OCS operations, through chronic low level pollution and large spills have affected fishery trends. They have not.* Comparing chronic and large spills into the channel over a long period of time with the sport and commercial catch, with an extensive review and analysis of trawl surveys, have not indicated any variation in trends from the natural cycles that occur in the Bight. The number, diversity and abundance of marine life has followed a consistent pattern with, especially, periodic changes in abundance as part of the natural cycle of the area.

Extensive offshore operations in 3 areas appear to provide a case whereby we can have the assurance to prudently proceed in frontier areas. It would seem that if we had a choice for a basis to make a decision, then the best one could ask for would be to have crude oils chronically effect a coastal area, as well as the

*F. Hester, "OCS Development in the Santa Barbara Channel: Lack of Delectable Impact on Fisheries", OTC Paper #2756, 1977, p.261-267.

the occurrence of intensive OCS development in active, and preferably different, marine areas for a long period of time, so that we could make a realistic judgement about the potential impacts of OCS development. This has occurred, and though mishaps have taken place, on balance the record is favorable. Though one can make qualifications and point to effects - Santa Barbara, the low toxicity of seep oil, the collection of seep oils in basins than on shore, dredging, the unknown effects on class-years, turbidity, tar depositions, bleedwater discharges, pre-empted space, gear conflicts, etc. - they are qualifications, and on balance the areas as a whole have remained and are continuing to remain productive marine environments. To ask anymore at this time is a demand that fails to place the worst possibilities commensurate to the overall context.

EVALUATION

We shall now proceed to evaluate the anticipated impacts of OCS development and give reasons why we hold the impacts to be within acceptable limits.

As just noted, a fundamental shortcoming in evaluating the possible impacts on frontier areas, has been the lack of consideration of OCS experiences from other areas. No significant recognition has been given to these experiences. This is obvious in the EIS for Lease Sale areas. Also, the Act does not encourage this consideration. Though some state that NEPA regulations require an environmental statement to focus on the 'uniqueness' of an area, it should be noted that one can only determine what is unique by distinguishing it from what is common.* Thus the Georges Bank area is highly demersal, unlike the Gulf, but it is similar to the North Sea in this regard. Consequently, the fishing methods differ with the Gulf. But the fishery officials from the United Kingdom have handled fishery conflicts with oil which result from the method of harvesting by a special means of compensation;** and similarly, we are doing the same with the legisla-

*Neither the Act nor the regulations state, at least explicitly, this requirement. But the regulations do recommend against duplication and waste. NEPA Regulations, 1506.2, 1506.4.

**Both Norway and the United Kingdom have established compensation funds. In the United Kingdom it is administered by fishing associations for debris that cannot be identified with a company; in Norway, claims are made to the government and the state pays if it is possible that the loss is oil-related. There is dissatisfaction of fishing groups with the arrangements and the fishermen contrast this response to the way USA legislators are responding to the anticipated problems on their shores. See p.114, op.cit. (North Sea Pipelines), NERBC, 1979, p.49,55.

tion. But note that it is from what is common that we have adapted OCS developments to frontier areas. What is unfortunate, is that other common elements have been lost sight of, with frontier areas anticipating the worst, and letting this establish policy. We are mystified at the lack of consideration given to past experiences. To ignore the laboratory of time is inexcusable and completely unscientific. What may explain this is that those who specialize tend to lose sight of an overall perspective; and those who don't, tend to think of impacts on their area in terms of possibilities.

Another distinction that is ignored is the distinctive difference between the potential impacts of the exploratory and development stages. The former poses few environmental problems. Though some raise objections, neither the drill cuttings nor the discharged fluids pose a serious threat to the environment.*

"...there have been no indications of biological impacts from discharges of produced waters with an oil content of approximately 50 ppm from OCS platforms. Such discharges quickly disperse to nontoxic levels in the low ppb range. Hydrocarbons in these concentrations feed microbial oxidizers and may be beneficial."**

Besides, the amount to be discharged is known beforehand, as well as the estimated impacts.

*"Sediment transport on the continental shelf is difficult to calculate but is known to be very high. Thus, the contribution of drilling fluids and cuttings to coastal and continental shelf waters is extremely minor compared to similar sediments contributed by rivers & natural resuspension & transport of bottom sediments.", C. McAuliffe & L. Palmer, "Environmental Aspects of Offshore Disposal of Drilling Fluids and Cuttings", Society of Petroleum Engineers of AIME, Paper #SPE 5864, 1976, p.5-6.

**E. Danenberger, "op.cit.", p.20-22. See also p.84, footnote, Gordon ref. See also, Georges Bank Petroleum Study, Vol. II, MIT, 1973, p.268-269, "Even if all the oil (after separation) were soluble aromatics, toxic effects would be limited to the most sensitive phytoplankton, & this effect

In respect to oil spillage,

"Very few spills have occurred during drilling and even fewer during exploratory drilling."*

Further,

"As of Jan. 1, 1978, 5,286 exploratory wells have been drilled offshore, of which 4,435 were dry."**

Additional restrictive regulations (planning as well) for 851 successful wells (25%) drilled (most of which are safe) over a long period of time approaches the absurd. The problems that will occur in the exploratory stage are those that we have mentioned, namely the conflicts with other methods used to work the bottom. The exploratory rigs pre-empt more space, and the whole operation is one of tooling, and consequently the vessels actively transport heavy and mobile material to the rigs, some of which can be lost in transit, as well as at the rig. But though we consider it to be the most likely problem to occur in our area, it is well within the capability of management. Consequently, we find it inappropriate to lump exploration with development and imply that the safeguards necessary are comparable. The distinction between the 2 stages imply two distinct sets of safeguards with corresponding controls, one of which should be much less restrictive. This phase of operations should proceed with little cause for delay, and the corresponding regulations should give consideration to expedite the process.

would be localized in a very small portion of the Bank." (p.268). In respect to the contribution of trace metals, with the exception of 4 metals, their concentration in produced waters is not much different than seawater. The level of the others is at such a level that slight dilution will bring them below the toxic level. See p.21, Koons & McAuliffe.

*E. Danenberger, "op.cit.", p.20-22. See also p. 84, footnote, Gordon ref.

**Exxon Report, Office of Regulatory Affairs, Houston, Texas, 1979.

In the same vein, we also find it very puzzling that the development of gas should entail the same restrictions as oil. Quite unlike the other fuels, a non-mixed well of gas is relatively clean, excluding some minor impurities, and the least threat to the environment.* There are safety considerations, and pipeline obstructions, but the impacts are not primarily environmental. In respect to the obstructions, the Georges Bank area seems suitable for this kind of operation.

"Further, the area should be generally free of the topographic difficulties common to other areas, such as pipeline rupture or drilling problems arising from unstable sediments or faulting. On the other hand, pipelines will not sink spontaneously into the compacted bottom as they do in the clays of the Gulf shelf, nor will sedimentation cover them, so that they must be buried mechanically if they are to be free from trawl operations. The absence of stormy currents also means that displaced materials such as drill tailings and trench spoils will remain relatively undisturbed where they are dumped. The areas of the outer shelf geologically unsuited for pipeline are the ridges of Georges Bank and the Shoals. These highly mobile sand waves create a special problem for pipelines in transit to coastal sites.**

Further, there were short periods of time when large amounts of oil entered the environment, namely, the tanker sinkings at the time of world War II, indicating the resilience of the ocean to absorb considerable amounts of oil

*In fact, a large gas find, unlike oil, can lead to a substantial improvement in the region's air quality (reduction of sulphur oxide (SO_2) emissions). See "Georges Bank Petroleum Study", Vol. II, MIT, 1973, p.308-309: "...the percentage reduction (SO_2) due to a large gas find can be quite substantial for some time." (p.309).

**R. Black et al, "Effects on Commercial Fishing of Petroleum Development off the No. Eastern U.S.", Woods Hole, 1976, p.30.

in a short time with no appreciable effects on marine life.*

And moreso, the same event occurred in the North Sea at the time of World War II with no apparent effects on marine life. At that time the stocks were unusually low in the North Sea, but the net result was an amazing recovery of the stocks such that the recovery of the stocks appeared to be virgin stocks.** Undoubtedly, the reason for the recovery of the stocks was due to the sharp curtailment of fishing effort during the time of the war. This indirect way of conservation was the cause of the recovery. Though one may argue that not all parameters are the same, and the comparison invalid, we think it is belaboring an issue to hold to a point. Certainly, the oil spilled did not significantly affect nor interfere with the resilience of the stocks to replace themselves, even though they were at a critically low stage.

Further, there is evidence that at certain levels, the dilution of crude oil can stimulate the growth of phytoplankton (passively floating plant life), the basic building block of the ecological systems and a primary measure of biomass in the system.***

Further, most crude oils (90%) have specific gravities less than seawater, and consequently pose little problems to the deep water commercially viable

*In the 1st 6 months of 1942, 145 million gallons of oil were sunk within 50 miles of the coast. (D. Horn et al, "Impact of Oil Spillage from World War II Tanker Shippings", MIT, 1977.) See also, "The Argo Merchant Oil Spill - A Preliminary Scientific Report", NOAA, March, 1977. The spillage for the period of time mentioned above for World War II is equivalent to about 20 Argo Merchants.

**Pers. Commun., Office of International Fisheries, NOAA, Washington, D.C.

***See Gordon & Prouse ref., footnote 1, p.84 for detail.

species of our area (groundfish)*. When the oil has weathered to the point that its gravity is greater than seawater, most of the toxic elements (soluble aromatics) have evaporated. Also, OCS platforms contribute less pollution than the imports from tanker operations that would be reduced by this operation. OCS platforms contribute 1.3% of total pollution, while transportation accounts for 35%. Of the two operations, OCS activities contribute 18% of oil spillage compared to 82% for tankers. And more recent data confirms the lower spillage rate of platforms.**

*See footnote, p. 58. If the Scotian shelf is similar to Georges Bank, the crude oil of Georges Bank is likely to be lighter than seawater. Personal communication, C. McAuliffe, Chevron, and H. Bybee of Continental Oil.

**From 1971-75, the first years complete records were filed with the USGS, platforms in the Gulf of Mexico had a relatively low spill rate. (See E. Dangenberger, USGS Circular #741, 1976). However, the platform rate vs. tanker rate may be in need of qualification. As a percentage of total pollution, OCS operations contribute a small per cent, namely 1.3% as compared to 34.9% for transportation (or 4% as opposed to 46.1% for marine operations, Kash, p.60,87) This is a standard way used to contrast the spillage contribution of the 2 ways of distributing oil to ports. But this can be misleading. It is a comparison between the means of production and a method of distribution. (A comparison of the means of production, between onshore and offshore operations, is less for onshore operations by a factor of 5. The percentage of blowouts for wells drilled is: onshore, 0.039%; offshore, 0.195%. See Kash, *ibid*, p.286.) But if one compares the volume spilled to the volume produced or transported, (drilling, production, transportation), then tankers spill less by a factor of 5 (OCS rate, 0.0028%; tanker rate 0.016%. See E. Danenberger, *op. cit*, p.19; Council of Environmental Quality, 1974). Also, minor and moderate spills are less for tankers, averaging 1 bbl per million bbls transported, compared to 9 bbls produced or transported by OCS means; major accidents are less, averaging

34 bbls (50 counting nearshore tanker barges) per million transported, compared to 140 bbls for OCS means. But if one considers and compares tanker ballast discharges with OCS waste water discharges, then OCS means of discharge are decidedly less, averaging 9 bbls (35 bbls if nearshore operations are counted) per million, compared to 740 bbls for tanker operations. The comparison which is significant is what difference in the amount of spillage would OCS operations have over imports. On this basis OCS operations have a decided advantage. A total of 175-565 bbls were spilled for OCS operations is then compared to 790 bbls for tanker operations. On this basis, of the two means of operation, OCS activities contribute from 18% to 41% of the spillage, while tanker activities contribute from 82% to 59%. The difference between the 18% and 41% is due to the reported statistics. The low estimate of 175 bbls is based on the USGS report of 140 bbls for major OCS accidents from 1964-71, while the 565 bbls spilled is based on the report from worldwide sources, and covers an estimated range of spills for the same period of time. Kash uses the lower value (USGS) for forecasting purposes. See D. Kash, "ibid," Appendix B, Oil Pollution and Accidents, p.275-309. See tables p.294,296.

But in comparing OCS platforms with tankers, the analogy is still not completely appropriate, since the method of transportation is at least partially included in the OCS measure. If one compares pipeline transportation only which is associated with OCS production, with tanker transportation the results are interesting but inconclusive. The number of spills per ton-mile transported is higher by a factor of 30 for pipelines (U.S.); and the volume (bbl) spilled per ton-mile transported is higher for pipelines by a factor of 5; but the volume (bbl) spilled per barrel transported is higher for (worldwide) tankers by a factor of 16. And this would have been reduced considerably, to a factor over 3, if the period of time selected were 1967-1975, instead of 1969-73 (& 75), the latter being the time period for the comparison.

Since the distance transported is not as significant for delivery from the shelf to coastal ports, then the Vol/bbls measure may be the appropriate measure. Then pipelines have the advantage, especially as opposed to coastal tankers which have a higher rate of spillage than worldwide tankers. But the comparisons seem to be unreliable for the sampling base for pipelines was very limited. The uncertainty & varying estimates is noted in, "Georges Bank Petroleum Study", Vol. II, op.cit., p.42-43a. Consequently, the claim that pipelines, by reducing imports, will reduce spillage is misleading. See R. Stewart, "The Tanker/Pipeline Controversy", 1977, Oil Spill Conference, API, Washington, D.C., p.95-96, 98-99. See esp. table #5, Spillage and throughput for (worldwide) tankers. The comparison is between tankers (1969-73) & U.S. Offshore transport pipelines (1969-75). Notwithstanding Stewarts conclusion, OCS platforms contribute less spillage over tankers, for the ballast discharge of oil was not considered. This chronic low-level contribution is missing in his study, though if legislation were to confine the discharges to deep ocean waters, tankers could be the preferable means of transportation for oil. But production is of crude oil, which is relatively non-toxic, while many tankers carry refined oils. On balance, then, platforms are less cause for harm.

SUM

To sum up. Most criticisms of OCS activities have failed to give due consideration to historical experiences which have occurred in intensive fish and oil areas. Though the Gulf of Mexico is dissimilar to other areas, there is a common element. And development in the Gulf has occurred in a prolific and ecologically sensitive area. Corrections have been made, safeguards implemented, such that their early mistakes signal that current and past operations are not seriously impacting the environment and are within the capability of sound and reasonable management. The North Sea development, as well as limited experience in exploration off Canada, are signs that development can occur in the harsh northern waters without causing serious and long-term harm. That natural seeps have occurred for centuries on a narrow continental shelf in Southern California without affecting marine life is another sign that nature has the tolerance with this natural product. Marine life has not been affected in the long run. Surely this area, an area of long-term OCS development alongside centuries of crude oil seepage close to shore, coexisting with an active and diverse marine community is a signal that the laboratory of time indicates the environment has the capacity to tolerate and withstand the presence of crude oil without affecting its renewability.

We are not talking about a synthetic chemical combination that has not been tested with nature over time. These historical experiences cannot be ignored. As naive as it may sound, ultimately, the activities of OCS development and OCS marine life can coexist, since oil and water don't mix, with most of the product evaporating into the atmosphere and what remains is inert, particulate, unappetizing and relatively nontoxic.* The problem we foresee is a conflict between the 2 industries of fish & oil.
 *See p. 76-84, for detail.

But it is a manageable one, and again, ultimately, the conflict is resolvable since they are after different resources located in different places. The requirement of one is horizontal, the other vertical. Consequently, the displacement entailed by the presence of the two industries is minimal.

Other evidence concludes to the same. At certain levels, when oil is diluted, and which it will be when dispersed in the water column of the open seas, it can function as a stimulant to phytoplankton growth. There have also occurred short periods of time when spillage has been substantial, yet nature did not appear to be affected. In terms of a society which is committed to the use of this resource, OCS operations seem to contribute less harm than the other means available, and OCS development will reduce the need for these means.

Lastly, to end on a more positive note, the OCS structures function as a habitat for an amazing abundance of finfish throughout the water column.* Most adult and juvenile finfish species avoid the presence of oil. Consequently, their presence about the structures is a sign that whatever spillage contribution the platform makes, is quickly dispersed and diluted to harmless levels.

The environmental problems of OCS development in offshore waters that we foresee are those whose likelihood to occur are infrequent. In respect to offshore waters, most oil spillage will remain on the surface. The possible conflict here is with the spawning cycle, i.e. the intersection of the surface oil with the surface presence of eggs and larvae in the maturation cycle. But the likelihood of this affecting the development of the species in the long term is very remote, since extremely high mortalities occur at this stage of maturation in the not uncommon upheavals of the ordinary environment.**

*For detail, see p. 88-90.

**For detail, see p. 83-84.

The other problem we foresee is the effect on coastal bays. It is not the aesthetic nor recreational losses which could occur that are the primary concern, but the effect on marine life which is harmful in the long run.

Oil trapped in bays can be a problem, retaining it sufficiently in shallow depths so that it will be mixed throughout the water column, become attached to sediments, and enter into the substrate on a long-term basis. As opposed to this, most OCS development will occur in offshore waters, and it is unlikely that the oil will reach coastal areas before dispersal.* Also, the element is crude oil, unlike the refined products which are more toxic. The highly soluble aromatic derivatives will have been evaporated, and what remains will be in a form unlikely to seriously affect nature. The other effect of consequence will be on birds.** This is an especial problem since most of the oil remains on the surface. But we must note that its presence is short term, that the problem is acute near landed areas, and that it has not been a significant problem in the Gulf of Mexico, a habitat for numerous species of birds and a wintering ground for more than 6 million

migratory waterfowl.***

*See Georges Bank Petroleum Study, "op.cit.", Vol. II, p.266: "...between 0% and 5% of Georges Bank spills will hit the coast. They will probably have little biological impact...."

**"Birds...appear to be one of the most vulnerable groups of populations examined," S. Moore et al, "Potential Biological Effects of Hypothetical Oil Discharges in the Atlantic Coast and the Gulf of Alaska," MIT, Report to Council on Environmental Quality, 1974, p.118.

Although a wide variety of seabirds may be adversely affected, only a few species are severely damaged. See "Petroleum in the Marine Environment," Nat. Acad. of Sciences, Wash., D.C., 1975, p.92. The islands off Santa Barbara provide nesting and roosting sites for numerous bird species, which are within short flying range of the numerous slicks that have periodically occurred for years. According to pre-and post-spill surveys of the 1969 S.Barbara spill, the number and kind has not been affected. See L. Shanks et al, "op.cit.", (Calif.), 1978, p.12; E. Smith et al, "op.cit.", (Coastal County Fish & Wildlife Resources), rev. 1976, p.177; See p.44 for reference to Nat. Audubon surveys of the 1969 S. Barbara spill.

***See p.17. Many of the coastal areas contain bays and beds for shellfish, as well as providing nesting areas for seabirds. Consequently, we recommend that revenues be earmarked for research in this area. That trial runs be made with the more recent dispersants (which supposedly do not have the side effects of earlier materials), burning wicks, and that some innovative techniques be developed for booms to be placed across inlets, harbors, or bays which would entrap the oil. There seems to be little solution for avian life, except the effective use of dispersants by minimizing the time the oil will be present on the surface. According to recent research, the use of the dispersants may be effective in this regard.

We offer no foolproof solution to an inevitable incompatibility that must exist between parts of nature. But there are limits, these limits are tolerable, and the evidence of time and argument indicate that the worst that will occur will occur within these limits.

We do not hold that it is a case of running a risk in order to let development occur. Argument and the record of time indicate this is not the case. But given our dire economic circumstances, the need for this resource is too apparent, and consequently, there is no alternative but to proceed. We are not talking about a quality of life that seeks abundance - we are talking about meeting a basic need. We grant there are those who think of meeting current demands in a quantitative manner so that we can continue to think in terms of consumption. This is not our concern. Our concern is basic - to have homes, to heat homes in winter, to have secure employment, to have periods of time when children can be cared for by both parents. Our City is classified as an economically depressed urban center. We know too well the difficulties our citizens are undergoing to meet basic needs and have ends meet. The median family income in 1978 for the City of New Bedford is \$9,750. For minorities, \$6,720; for Spanish-speaking origin, \$4,990; for those 65 or over, \$5,970; for households with female head (no husband), \$5,280. If one is to consider median incomes to include unrelated individuals, then the statistics are even more depressing - the City median is \$7,940, and households of one or more unrelated individuals is a staggering low of \$3,630! Most of the latter, 95%, are the elderly.*

*City of New Bedford, "Population & Housing Survey," prepared by Opinion Research Corp., Princeton, NJ, 1978, on file with New Bedford Planning Dept. We became so concerned about the income figures that we sought a Harvard demographer to review the data and assess its accuracy. There is a tendency to underreport income. The values may be accurate, but if corrected by a factor of 20%, they are acceptable as basic indicators. This raises the City low from \$ 3,630 to \$4,356! In any case, the relative incomes within the City appear to be accurate. The City went out of its way and did not spare costs to assure that the research and sampling methodologies met high professional standards. The demographer agrees with this: "Based upon my session with representatives from the Opinion Research Corp., several follow-up conversations by phone, and

Consequently, it is our opinion that the primary concern is to provide us with resources that meet very basic needs. The resource we are talking about is one that pervades our economy. The economy can be trimmed. It can be modified. But it must be provided the resource that will keep it running. It is this threat that is before us. In view of this we see no reason to delay the search for a resource that is necessary not only for immediate needs, but to enable us to have the safeguards necessary so we can order our life in a balanced manner.

Footnote Cont'd.

examination of the survey data themselves, it is my opinion that the highest professional standards were followed in the design and execution of the survey... (and) have given careful attention to the sampling procedures and weighting of the data to ensure a representative set of results," Report on Evaluation of New Bedford Population & Housing Survey, G. S. Masnick, Harvard University School of Public Health, Center for Population Studies, Dec. 1, 1978, p.1. (on file with the New Bedford Planning Department.).

THE ACT AND REGULATIONS

General Considerations

Hereafter, we shall follow the order of the Act and the corresponding regulations. In general, our concern is primarily in four areas:

- . the participation of localities and the State,
- . the transition between the exploration and development phases,
- . environmental considerations, and
- . the Fishermen's Contingency Fund.

We shall comment on the latter 2 sections later. Our concern with the second is related to the former in that the way exploration and development are reviewed by governmental bodies can determine whether the transition will occur expeditiously or not, and possibly not at all. It is our view that much of what will occur is not exceptional, and if treated so, then it can occur with little delay. (What is of concern is of an exceptional and emergency nature, but this defies planning (at best, it is contingency planning) and is something an operator cannot anticipate). Consequently, it is imperative that the reviewing agencies be able to distinguish what is routine, to recognize that much of what is anticipated has occurred with sufficient frequency and with reasonable management will carry a safe probability, and that those exceptions short of emergencies can be determined and not confused with what is standard. To assure this, we recommend that the various State staff be trained by either some sponsoring Federal agency, or the industry itself, possibly the API. We find it not out of order to have 30-90 day training sessions to acquaint frontier areas with the experience of other areas. Since there is a natural tendency on the part of beginners to be cautious in the face of the unfamiliar, especially when the absence of experience with the actual leads one to focus on the potential, then the reviewer faces a large spectrum of ominous possibilities that he

finds difficult to restrict in terms of what is likely to occur.* Funding to gain this experience and training is available through the Coastal Energy Impact Program.

There is also an inherent ambiguity on the part of some data submitted in the exploration and development plans, especially the former. Since one cannot specify with accuracy when the process is dependent on contingent variables, or specify onshore locations when such are to an extent dependent on availability at a point in time, and such locations can only be decided upon with direct negotiations, which negotiations may be pro tem if location is dependent upon the State's approval, then the industry cannot file exact plans and the reviewer cannot expect this.

Further, in order to avoid premature and negative decisions that could be due to singular motives, to excess concern, to incompetence, to meet demanding deadlines, to the human array of imperfection, we suggest that either the industry meet with the State staff prior to crystallizing their point of view, or if the evaluation will be negative, that the industry be permitted the opportunity of dialogue in order to see if an accommodation can be made.

In respect to the localities participation, the opportunity should be available for participation, for likely to be affected communities who are willing to assume this as a responsibility. Unfortunately, the large numbers of localities places limitations on their participation, at least

*A case in point is Tenneco Oil Co., in conducting activities in the Baltimore Canyon. Over 2 years have passed since the leases were awarded, and yet they have not been allowed to drill the 1st exploratory well. Though there are areas where it may be difficult to satisfy compliance with the regulatory agencies, we find it inexcusable and deplorable to halt a sale for such a period of time. It is an example of bureaucracy at its worst. See Testimony, J.B. Foster, Tenneco Oil Company, House Oversight Hearing, Dec.6, 1978, p.2-4.

for an initial structure to accommodate all communities. But there is a way to accommodate the 'willing' community. Thus the notification of select communities, either selected through CZM plans or the State, or selected after an initial notification and review of all coastal communities, will provide a basis for future notifications. The notifications will make those communities aware of available documents, plans, periods of comment, indexes of materials. Upon their request, those materials will be made available to them for review and comment, with the opportunity to forward them to the appropriate reviewing agency. We also ask that consideration be given to the individual or interest groups.

In respect to what reviewing agency to forward the comments to, since localities are part of a whole, then we don't find it inappropriate to forward materials to the State in order to incorporate the communities point of view into the State's final perspective. But at the same time, since the ultimate responsibility for OCS development is Federal, and for the most part it is not a case of Federal activity within State territory, then any party has the right to deal directly with the responsible agency, despite an opposing view by the Secretary:

"Once a proposed leasing program has been sent to you (the State), the decision is entirely up to you. If a local government requests a copy of the proposed program, it will be your responsibility to send it," Oct.25, Letter of Secretary Andrus to Governor Hammond (Alaska).

The State of Alaska objects to this approach:

"We do believe, however, that the State should not act as an agent for the federal government...."*

* Testimony before House OCS Committee, Dec.7, 1978, B.Baker, Division of Policy Development & Planning, Office of Governor, Alaska, p.2. See also Testimony, M.Oliver, Sierra Club, San Francisco, CA, House OCS Committee, Dec.7,78,p.2. However, for an opposing view, see Testimonial, J.D.Gooch, V.P., Houston Oil & Minerals Corp., on behalf of National Ocean Industries Assoc., Wash., D.C., Dec.6, 1978, p.14: "...too many local agencies...like too many cooks in the kitchen, will increase delays..." Alas, it all depends on how you like your soup.

The Mass. OCS Coordinator has expressed a view sympathetic to greater local participation. Further, the State of California shares the same view for offshore areas outside the State's jurisdiction. The ambiguity between Section 102 and 208 needs clarification, and since the former is a more general consideration (Purposes & Policy), it could override the latter. Where OCS activities

"impact directly on a local area, that area's officials are entitled to direct communication with the appropriate Federal agency representatives."*

We have no objection to submitting our comments prior to sending them to the State, though the Law cannot be stated this way. And we would not be adverse to a grace period so the State can respond to our point of view, as well as permitting us to respond to the State's. A particular problem that localities have with States, and we believe it is a general one, is that one never knows what is going on up there and what happens to what one says. Further, there is a natural tendency to favor communities closest to the radius of influence, as well as to distribute funds numerically than in terms of need, especially when need can mean many things.

We have a particular fear in respect to a tendency to decentralize existing established ports and proliferate new commercial fishing ports by providing funds for their development, when the established ports are still under-utilized or in need of and have the landed capability of immediate expansion.**

Our experience only confirms the need for a locality to be able to go directly to the responsible agency. There is no comparability of the Federal staff with regional capabilities, though the latter affords some distinct benefits. The availability of literature, of specialized advice, of authoritative interpretations is obvious. There are also imperfections at the

* Testimony before OCS Conference Committee, Dec., 1978, D. Grene, Deputy Director, Governor's Office, CA., p. 7.

** This is especially critical now that new sources of funds are coming on line.

State level. For the case in point, the City of New Bedford has taken and filed with the Court an opposing point of view of the Commonwealth on the Georges Bank Lease Sale (amicus curiae for the defense). On numerous occasions, we have requested information from the Office of Environmental Affairs and received nothing. It may be due to understaffing, but this is precisely our point. While we commend the State for a number of planning measures in anticipation of OCS activities for our area (e.g. an OCS conference; a grant on proposed developmental possibilities), nonetheless, the shortcomings are there. Further, CZM policies rest in an Office (Environmental Affairs) whose explicit end is to safeguard than develop. The structure of this office inevitably affects policy with the latter receiving a lower priority. This Office has played a substantial role in determining policy for OCS matters.

While we commend the integrity, dedication and conscientiousness of some of the staff, nonetheless, from our point of view, the State's decision to stop the sale was based on a worst case analysis, and we see the basis for this in the office handling the matter. Balance was lacking. The same can be seen in the CZM plan. While we commend the plan in many respects, especially the directing of development to compatible areas, and the respecting of home rule in those areas, nonetheless, there is no requirement that a variety of areas will have to provide facilities if the need arises to meet OCS and national needs. We recognize the dilemma, but at the same time, there is the responsibility in order to assure the onshore provisions of exploration and development plans, not to mention the need of a refinery if the level of production requires it.*

*Though we feel the State has ample onshore areas to satisfy most OCS-related needs, there is always a problem with the refineries. In terms of the CZM plan satisfying the National Interest for energy-related activities, this could be a problem. While a refinery is not a facility generally considered to be of interstate commerce, nonetheless, if the volume of oil should require such a facility, it would seem that the landed bodies would

We will provide an amendment to the Act to assure this.

To close, we urge that a certain looseness be followed on the part of all reviewing agencies in holding the industry to their specific assessments, since exploration and development can involve a number of intangibles as well as unanticipated and surprising options which no one can predict. Thus an attitude must exist to expedite such events. The frame of mind must exist to distinguish between what is major and what is minor, the latter of course being qualified to be treated expeditiously. A training period will be a step in this direction. We also urge that affected localities be provided avenues to effectively participate. The following comments will be confined to the Act and impending regulations.

Footnote continued:

have to make available a site within practical distances of the OCS lease area to meet the provisions of the CZM Act. Though the satisfaction of the National Interest need not designate only one State, nonetheless, some State would have to provide the site. And this is a problem. Consequently, States should, and we feel are obligated to, provide a site. Unfortunately, the State of Massachusetts does not necessarily have the authority nor is the statute defined in terms of the National Interest.

According to General Laws, Chapter 164, Section 69H, the Energy Facilities Siting Council is the body responsible"....for implementing the energy policies...to provide a necessary energy supply for the Commonwealth with a minimum impact on the environment at the lowest possible cost." The Council may function under agreements with States or as an agency of or in cooperation with the Federal government in certifying the construction, operations and maintenance of energy facilities. (Sec. 69Q). But the ultimate decision lies with the State, nor is any special obligation to the National Interest stated. Further, the Council can not supersede local regulations which involve the siting of oil facilities other than pipelines. If a local zoning by-law prohibiting oil facilities has been placed into effect prior to a filing by an oil company of a notice of intention to construct, the Council cannot override the local ordinance. Most localities would have advance notice of this intended facility. (Final EIS, Mass. CZM Program, 1977, p.136).

While we sympathize with localities and with the State, nonetheless, the obligation is there, not only in terms of the National Interest, but in terms of Regional needs. Unfortunately, when it comes down to an actual choice, not a general consensus, the record is dismal. In terms of practical access to on-shore areas in the event of an OCS need, there are only 2 choices - Massachusetts and Rhode Island. Both have poor records when push comes to shove. Consequently, there has to be some overriding authority to mandate a site to meet a National need, not to mention a Regional one. Hence, we recommend an amendment to the OCS Act to assure this. The need for this is National and is appropriate for States other than Massachusetts.

PURPOSES AND NATIONAL POLICY

Section 102

The first section concerns the relation of the State and localities:

Act, Sec. 102, (4),(5), (6) and Sec. 202, Sec. 3, (4) (B), Purposes and National Policy, should be amended to read:*

"such states, and with such states, affected local governments, are entitled to an opportunity to participate to the extent consistent with the national interest...."

OIL AND GAS EXPLORATION

Section 11

To assure that State CZM plans can guarantee adequate onshore facilities to meet the onshore needs of offshore exploration, development, and production plans, the Federal government should annually review the CZM plans to see if they meet the needs of the National Interest. This will lessen the onus of such decisions on the Secretary in the event of an impasse between the State and industry, making it likely that the ordinary procedures will provide ample provisions for landed interests to be consistent with the National Interest.**

Thus, Section 11 (2) (c) (2), Oil and Gas Exploration and at Section 25 (d) (Oil and Gas Development and Production) and h (1), line 19, and h (1) (B), line 15 and h (2) (A) (ii) should be amended to read:

"and annually certified to be in compliance with Section 305 (a) (8) as amended by Section 306 (3) (8) of such Act."

The amended paragraph shall read,

"The Secretary shall not grant any license or permit for any activity described in detail in a exploration plan and affecting any land use or water use in the coastal zone of a State with a Coastal Zone Management program approved pursuant to Section 306 of the Coastal Zone Management Act of 1972 (16 U.S.C. 1455), and annually certified to be in compliance with Section 306 (3) (8) of such Act, unless the State concurs....or the Secretary of Commerce makes the finding authorized by Section 307 (c) (3) (B) (iii) of such Act."

* Only Sec.3,(4),(B) is stated in full. 'Through' is deleted and replaced by 'with'.

**CZM Act, Sec.305(b)(8), and 306 (c)(8).

ENVIRONMENTAL STUDIES

Section 20

We also recommend at Section 20, Environmental Studies, that the Secretary commission continuing studies to inventory the marine biota, since such studies will provide a base* from which select OCS effects (e.g. chronic low-level pollution) can be determined. Further, we view with particular concern the effects of such pollution on spawning areas since this part of the life cycle is at the surface, while most crude oil tends to have a specific gravity less than water.**

*Baseline studies should be ongoing, and for areas prior to a sale. But the timing should not hold up a sale. As long as an area has potential oil reserves, studies can be commissioned years in advance. Section 20 (1) and (2) may need clarification in this regard. We do not feel California's requirement of complete baseline studies prior to a sale is justified, though they would be valuable. See D. Grene, op. cit., p.4.

**An API gravity of oil less than 6.55 is expected to sink and will reside at the water-sediment interface. Ninety per cent of crude oils are greater than 15 (R. Kolpack, et al, "Fate of Oil in a Water Environment", Vol. I, University of California, 1973, p.7; H. Smith, "Qualitative and Quantitative Aspects of Crude Oil Composition", Bureau of Mines, Bull. 642, 1968)

Let us suggest some studies:

#1 - To use the offshore structures as an oceanographic measuring base to provide continuous data about the hydrographic conditions of the area.*

#2 - That comparative marine studies of intensive oil and fish areas be made to determine what is common to differing areas, and determine the effects of the cumulative oil experience that one area would predict for a frontier area.

#3 - That spawning conditions be researched to try to determine egg and larvae locations and migration patterns; to determine the place in the water for varying maturation stages of select commercial species; to determine the hydrographic conditions for strong class years. To compare the vertical profile of oil, especially the soluble aromatics, in the water column over a period of time with the vertical profile of the early maturation cycle for the species, and possibly derive an intersection profile of the two processes.**

#4 - To measure the likely sources of oil pollution (especially surface effects) in an area, and assess the impact such will have on the environment.

*According to Dr. Posgay, NMFS, Woods Hole, there is a need of continuous data, and the platform could serve that purpose. At one time, the old Texas Towers performed this function. This information would be helpful to gain information for class years. Once a year is identified, then one can check the data for that year. Such information would also be useful in providing some of the environmental information that the oil industry must file in compliance with the Regulations.

**For the vertical profile of the early maturation process, some research findings are as follows. For larvae haddock, 26m. (between 20-30m) represents the depth of maximum larvae density. This seems to agree with data on cod. 85% of the larvae population occurred within the thermally discontinuous water band, which occupied about 25% of the entire water column sampled. Most young redfish are concentrated in the thermocline, while most yellowtail larvae were near the surface at night, and at a depth of 20m during the day. As a rule of thumb, as the species matures it goes deeper into the water column. We have made considerable inquiries into egg and larvae stages as well as oil in the water column, and very little is known and much of what is known is uncertain.

Consequently, we feel that the environmental studies of any area or region should not only be to establish information needed for the assessment & management of environmental impacts, but to improve the environment, and the Secretary should enter into appropriate arrangements with the Department of Commerce to research and carry out projects to improve the environment. The City of New Bedford is the largest commercial fishing port in the No. Atlantic, and it is our community that will undergo the most offshore impacts. According to Olson and Grigalunas, "Fishing and Petroleum Interactions on Georges Bank", (Vol. II, NERCOM, 1977, p.229), the fisheries (scallops, yellowtail) most impacted will be in the area our vessels ply, and if OCS activities preempt fishing areas and reduce catches, it will be our port that loses the most. Their study sees that as a distinct possibility.

"A large proportion of the Georges Bank scallop and flounder grounds lies within lease tracts being considered for the lease sale. The impacts could be most noticeable in ports where these fisheries are important." (Ibid, p.229)

Consequently, we believe it is not asking too much for the environmental studies and programs to be undertaken in a more positive light, and that if the research for select commercial species indicates a developmental feasibility,

then revenues should be earmarked to undertake pilot programs to test their feasibility. Consequently, Section 20, (a) (1), line-4, should be amended to read:

"The Secretary shall conduct a study of any area... to establish information needed for assessment and management of environmental impacts as well as for improving the environmental benefits, of the human marine and coastal environment of the OCS... in such area or region. The Secretary may conduct experiments designed to ameliorate OCS impacts or to improve the environment by utilizing OCS structures.

It is to be noted that subparagraph (a) (3), the study of an area to predict impacts on the marine biota which may result from chronic low level pollution imply a range of studies for which some of the above seem to qualify. Similarly, some of our studies qualify under subparagraph (b), i.e. environmental information which the Secretary deems necessary, as well as the monitoring of marine life to provide time series and data trend information which can be used for comparison with any previously collected data, etc. Though ordinarily the time series would be to compare with prior collected data in the area, nonetheless, given our limited information, comparisons with data bases and cumulative experiences from other OCS and marine areas may be appropriate. The Secretary may utilize information collected in any study. Such studies may even be a starting point since the other area's environmental similarity can be readily compared with baseline information to be acquired. Further, the Act is very open, since the Secretary shall conduct such additional studies as he deems necessary.

Let us close on a note of qualified optimism. To our mind, what is negative* that is in need of evaluation is a low level state of chronic pollution which over time becomes cumulative and approaches a critical threshold which may have deleterious and irreversible effects on nature.** It is not the large spills which are the problem, as grossly spectacular as they are, though the mass damage could affect a strong class year. But given the decline in oil reservoirs and the definite limit of this resource, it would seem that the critical threshold in nature is not only a lower but an upper limit as well. *Natura ordine bene.****

*M. Connor and R. Howarth, "Potential Effects of Oil Production on Georges Bank Communities: A Review of the Draft EIS for OCS Sale #42," Woods Hole, 1977. While this criticism of the EIS makes a number of valid points, and certainly raises points worthwhile pursuing, it centers on 'possibilities', implying their generality. It ignores the historical experience in other OCS areas, except indirectly. It pays no attention to the positive aspects and relatively healthy marine communities in the OCS areas. Rather than say, given the small amount of oil, 'is it worth it,' given the small amount of oil one should say that the impacts are well within the capability of management.

**Since marine life is integrative, the fear is that chronic low-level pollution as cumulative could enter into the food chain. But studies indicate that a variety of marine species purge themselves or metabolize the oil when exposure ceases. (See J. Stegeman & J. Teal: "Accumulation, Release and Retention of Petroleum Hydrocarbons by the Oyster,..." *Marine Biology*, 1973, Vol. 22, p.37-44; R. Lee, et al, "Uptake, Metabolisms & Discharge of Polycyclic Aromatic Hydrocarbons by Marine Fish", *ibid*, 1972, Vol. 17, p.201-208.) At present, there seems to be little evidence of petroleum hydrocarbons in marine organisms. See, "Petroleum in Marine Environment", National Academy of Sciences, Washington, D.C., 1975, p.66.

***But to end on a more realistic note, "In offshore deep water areas the ecosystem is more stable and the placement of physical structures such as platforms appear to have little effect on marine fauna in the area. In fact the numerous offshore platforms have been highly beneficial..."

OIL & GAS DEVELOPMENT & PRODUCTIONSection 25

Sec. #25, Oil & Gas Development & Production is the most critical section in the Act. In the one case, it can cause serious delays for development, if not stop development, while at the same time it could grant the right to proceed but fail to safeguard the environment. While it is a critical juncture, our concern is that the evaluation of plans are too open to conflicts with weighted circumstances such that the evaluation can unnecessarily constitute a major Federal action, and lead to disapproval. Given an approved lease area, the developer should be assured that except for exceptional circumstances, exploration can proceed to production. What is unclear is whether the Act and Regulations will be read in a way to excessively and unnecessarily delay and prevent development. It is this uncertainty which will discourage the investments to maximize exploration.

To our mind, there are 2 major considerations in evaluating plans, both of which can lead to disapproval of the plans, whether or not it constitutes a major Federal action. They are:

1. Special geological considerations
2. Volume of oil and gas

The first concerns safety and impacts on the marine environment; the second covers impacts on coastal areas, as well. Both of these conditions are generally unknown till exploration has occurred, and then after when development may necessitate further wells which reveal new information. If the geological conditions are not exceptional,* then the conditions for uncontrollable discharges, blowouts, etc., appear to be minimized. Consequently, the remaining consideration is when the discoveries reach a point where the volume is of a magnitude such that there will be considerable activity, especially if the platform per unit volume is high. It is then when impacts on the human and coastal environment will be significant. If condition #1 is not

* See R.Black, op.cit.,Woods Hole. "The region (GB & BC) should be generally free of topographic difficulties...(for) drilling problems arising from unstable sediments or faulting." (p.30).

applicable, the issue is not, for the most part, an EIS which will stop development, but an EIS to formulate plans that will minimize conflicts. Though we believe the onshore, coastal, and human effects to be an environmental concern, ordinarily they are within the capability of management.

We make the distinction between a major Federal action which centers on the impacts on the marine environment, and one which demands planning because of the heavy activity that will follow as a result of large finds.

The former is primarily subject to an impact resulting from condition #1, while the latter will be effected from condition #2. As a rule, the former will be for geological conditions which are exceptional and thus involve a minority of leases, while the latter will be for a significant part of the area. Either the legislation or regulations should specify general criteria along these lines in respect to a major Federal action, in order to give some exactness so developers can anticipate what to expect. As it stands now, Section 25 looms as formidable.

We also find h (1) (D) puzzling when it talks about exceptional resource values in the marine or coastal environment when the Secretary shall disapprove the plan if the implementation of the plan would probably cause serious harm or damage to these resources. No one would disagree with it as stated for it is a truism. But there seems to be implied occasions of conflicts with areas that will prevent development for approved tracts. Certainly, exceptional areas, e.g. those designated in CZM plans, limit development by say, redirecting it to other areas. But the implication seems to say more, i.e., a notion that there are unknown and unexpected exceptional resources which can prevent the development of the tracts. There is no quarrel with this if this is infrequent or simply requires or recommends a minor movement of a drill to avoid a special condition. So what it must mean is that there are ways to avoid or mitigate

impacts on exceptional resources and yet be able to develop the tracts.

Thus there must be available areas to lay pipelines, onshore areas to provide termini for traffic, the likely satisfaction of geologic conditions in marine areas for oil and gas reservoirs. Stating the problem in this way, at least reveals some light at the end of the tunnel. Otherwise, it is a cruel hoax on developers as well as to the public. In effect, we are saying that approval of a lease sale means that only for exceptional circumstances will development be denied - and exceptional means something unexpected, not known prior to the lease sale. To our mind, the primary exception will be the geological conditions and not already existing exceptional marine and coastal resources. The granting of the sale means that development and production plans can be filed to accommodate the already known exceptional resources. Also, lease sales consider geologic hazards and exclude such tracts.* The Gulf of Mexico has exceptional marine and coastal resources, and development has not caused serious harm or damage. We are not so naive to believe we have pinpointed the distinction between exceptions so that there are no other exceptions. Indeed there may be, but the point is they are exceptions. And for the most part, exploration can proceed to development and production, which is all one can ask for, but it is also what a developer should expect. Exceptional geologic conditions and other unknown exceptions are the only restraints to prevent a lease from being carried to full term. It is this assurance which is needed.

There must exist a sense of confidence between the developer and the agencies so that relations will be cooperative than restrained. There should even be appreciation for a service that is meeting a human need which is national. On this basis a variety of recommendations can be made by the Director to suggest changes in plans which the developer would be open to, provided the change is indifferent to the estimated potential of oil and gas.

* USGS assessment of potential mid-Atlantic oil and gas hazards was the basis for the withdrawal of 27 tracts for OCS Lease Sale #49.

For example, changes could be made in a plan to drill at places other than 'x' if it would not affect the determination of nor development of the estimated oil and gas yield or overall plan of placing wells. Thus concerns like traffic, exceptional resources, fertile benthic (shellfish) beds, could be within easy accommodation between a developer and the reviewer. Since a developer has exclusive but not absolute right to a tract, for the immediate and planned for wells, then only within a cooperative spirit between the parties will there be the openness and willingness to accept such changes.

Let us now proceed to the amendments. We shall follow the order of the section. We have already provided amendments in respect to assuring the availability of onshore sites to meet varying offshore development and production capacities at Section 11 (Exploration) by requiring an annual certification of a State's CZM plan to be in compliance with Section 305 (a) 8 as amended by Section 306 (3)(8) of the CZM Act.

Section 25, subpart (a)(3) line 5 should be amended to read:

"....Submit such plan....upon request after notification,
to the executive of any affected local government...."

Subpart (c) should be amended to read:

- (1) the specific and estimated work to be performed;
- (2) a description of all facilities and specific and estimated operations....including the specific and estimated location and size of such facilities and operations, and specific and estimated land, labor, material, and energy requirements associated with such facilities and operations.
- (3) Such other relevant specific and estimated information as the Secretary may by regulations require.

The clause 'and estimated' is meant to provide some leeway with the plans in the event of unexpected contingencies, yet permitting development to continue without having to seek new approval. It provides a measure of flexibility in performing the developmental operations. Subpart (e)(1)

should be amended to read:

"At least once the Secretary shall declare whether the approval of a development and production plan in any area (or sub-areas) or the approval of the approved development or production plans....to be a major Federal action.

This amendment is very important for it allows the Secretary to place individual plans in perspective, not requiring a major Federal action until a cumulative point is reached when the combined impact may warrant the area to be classified as constituting a major Federal action.* Though the Regulations do provide guidelines for cumulative impacts, they presuppose an existing EIS. Further, nothing is stated in the Act and Regulations to encourage approval of initial individual plans, noting that a more prudent evaluation of the area is available at a later point in time.

This amendment is not extraordinary. The National Environmental Policy Act encourages it. Connected actions, interdependent parts of a large action, cumulative actions which when viewed with other proposed actions that have cumulatively significant impacts, should be discussed in the same impact statement. Similar actions, which when received with other reasonably foreseeable or proposed agency actions, have similarities that provide a basis for evaluating their environmental consequences together. When the best way to assess adequately the combined impacts of similar actions or reasonable alternatives to such actions is to treat them in a single impact statement, then the agency should do so. (NEPA, Regulations, Scope, 1508.25). We believe the above amendment utilizes the Act in its fullest sense. It is not negative, it is not piecemeal,**it gives due consideration to development by not harassing the developer, but permits the lessee to proceed until the need for overall planning is apparent. It recognizes that it is not piecemeal discoveries of

*In general, we feel it is wise to rule at least once that an area be a major Federal Action. But this consideration should not be absolute, since many areas may undergo very little activity.

**"North Sea Oil and the Environment," A Report to the Oil Development Council for Scotland," 1974, p.2," "...we are concerned at the prospect of piecemeal developments..." .

small quantities of oil and gas which can cause significant impacts, but it is the combined effect which can cause a substantial impact. It is at this point that NEPA regulations encourage an EIS.

But a difficulty with this amendment is that approval of a plan does not mean another evaluation will not take place at a later time. In this regard, a future plan for the area or subareas would not prevent development, for the plan would be to assure proper planning for the area as a whole. Those approved plans would be permitted to continue their operations, but be subject to modification as an effect of the National Environment Policy Act procedures. However, this problem, though not as extensive, exists under the current Act for at subpart (f), a major Federal action follows approval of a plan. Also, the Secretary shall review, from time to time, each plan already approved (h)(3). It should be noted, though, that this review provision is not equivalent to the proposed evaluation of an area, since (h)(3) is a review of each plan, and requires only a revision of the plan.*

Since a major Federal action of this nature is for planning purposes, the following amendment is appropriate: to add subpart (3) at (e):

"A major Federal action defined for an area or subareas shall not deny approval nor substantially modify the prior approved individual development and production plans, and they can only be modified in respect to future operations by the procedures of the National Environmental Policy Act."

Thus an approved pipeline cannot be altered, existing onshore bases cannot be changed, though future pipelines, etc. can be different from existing locations.

Subpart (f), should be amended to read:

"If approval of a development and production plan or development and production plans are found to be a major Federal action, the Secretary shall transmit the draft environmental impact statement to the Governor of an affected State, and upon request after notification, to the executive of any local government...."

*But this subpart could be amended to incorporate the above, and we suggest that it be amended in line with the other proposed qualifications if our proposal is rejected.

This amendment leaves it open to specify a group of plans as constituting a major Federal action.

Subpart (g) should be amended to read:

"No later than submitting recommendations to the Secretary, the executive of any affected local government must forward his recommendations to the Governor of his State."

In respect to the denial of compensation at h (2) (A) (ii), the need of the prior CZM amendments should be apparent. It is incumbent that the CZM Program will provide a variety of feasible onshore locations to serve as a termini for a variety of developmental possibilities. The only way to assure this is to annually review the CZM Plans to determine if they are in compliance with the pertinent section which assures the siting of energy facilities. It asks no more of the States than the Secretary asks upon reviewing development plans from time to time. It is a matter of checks and balances and assures that Regional needs correspond to National needs.

REGULATIONS

Since a number of the above amendments to the Act can only be incorporated into the Regulations if approved, we shall not extensively amend the Regulations. Our comments will be confined to singular aspects of the Regulations. But before proceeding to specific regulations, we shall discuss one consideration which necessitates a new Regulation.

We hold that the developer has exclusive but not absolute right to explore and develop a tract (see p. ____). Only for exceptions, should there be modifications.* We distinguish 2 kinds of Modifications - that whereby the Director can mandate the exclusion of parts of the tract because of exceptional conditions, and that in which the developer can recommend select priorities in the order of development of a tract, a kind of spot zoning, and on that

*For further comment, see Olson & Grigalunas op.cit., p.229. See also p. ____, footnote # ____.

basis make recommendations. For example, conditions in some parts may be exceptional but known, and if there is no practical reason why development could not start or proceed elsewhere, for the seismic data do not indicate any decided difference in the oil and gas potential for that subarea as opposed to other areas, then it would seem that the industry would be willing to accept the recommendation. Another example, and one important to us, would be the bottom contours effect on commercial trawling, or the fertility of the seabed for non-migratory species.

A small adjustment in the placement of the structure could mean saving 1 or more tows of the commercial fishing vessel, and thus make available a fertile bed for trawling. It is the City's fleet which will be most affected by Lease Sale #42, for the OCS area is predominantly a scallop and flounder ground. (41% of the benthic life of G.B. lies in the lease area).

Consequently, the Regulations, at the appropriate place (probably 250.34-2) should be amended to add:

"The Director may make modifications and recommendations in the plan to give consideration to exceptional resources and commercial fishing interests, in the event that sub-tract developments are indifferent in their estimate of oil and gas potential and do not affect the overall planning for the development of the tract."

Section 250.34-1 , Exploration Plan (a) (1) line 27-29, should be amended to read:

"An exploration plan....shall identify all the initial wells that the lessee proposes to drill, as well as the conjectured wells the lessee will drill contingent upon the success or failure of the initial discoveries to evaluate the prospective hydrocarbon accumulations...."

We find the Regulations too demanding for this stage of operation, and though 'to the maximum extent possible' admits some leeway, the requirement is too narrow. Subpart (a) (1) (iv) should be amended to read:

"Approximate location of each proposed exploratory wells, as well as the locations of conjectured wells based upon the initial discoveries, including...."

We are also encouraged by the Regulations at 250.34 4 (a) (4) (ii) and (b) where the cumulative impact of proposed activities is considered, as well as the considering of a number of plans covering an OCS area where there is a likelihood of significant development, such considerations being the basis for an EIS. However, we do not feel this approach should be restricted to successive EIS, but should be available at the start, and hopefully will expedite the approval of initial plans until a cumulative impact is reached necessitating the first EIS. It is more appropriate to think of a major Federal action in terms of an area, the only other consideration for a major Federal action being in respect to an individual site which runs geological risks. Our proposed amendments for the Act clarify this and provide authorization for the Regulations.

*E.Danenberger, USGS Circular #741, "Oil Spills, 1971-75, Gulf of Mexico, OCS", p.20: "Very few spills have occurred during drilling and even fewer during exploratory drilling."

TITLE IV, FISHERMEN'S CONTINGENCY FUND

Section #404

To our mind, as previously noted, the major problem for our area is the conflict between fishing and OCS debris. We have testified on this in the Senate. We also feel that the formation of cooperative and representative groups of both industries is extremely important to minimize conflicts of a more general nature. We have suggested the value of such groups below, where they can act as aids to the hearing officer in expediting small claims at the pre-conference level. For a fuller description of their role and organization, see Attachment # ____.

However, there is one central problem which both the legislation and regulations try to address and we question whether the adopted measures will be effective.*

In order to substantiate a claim for damages due to OCS related activity there has to be evidence. Since many objects, and not necessarily OCS related, are beyond the hauling capacity of fishing vessels, then the only way it can be secured is by a fisherman employing a service to retrieve the evidence. But given the risks whether the object is OCS related, as well as the large disparity between the costs of retrieval and costs of compensation (since most gear lost is a small claim), then this means

*Another problem is the 'pipeline dilemma, and it is one the Act does not address. If a fisherman is hung up on a pipeline, some recommend that a fisherman should release his gear rather than rupture the pipeline. But to lose gear to an object designated by the Survey, means the fishermen will not be reimbursed. This problem is similar to one faced by fishermen with the submarine cable of the Tel. Co. Their policy is to recommend release of the gear, and the fisher-

of producing evidence is outside the scope of most means available to fishermen.

While the 'presumption of validity' at Burden of Proof (Sec. 404) is an attempt to offset this by providing circumstantial conditions which would seem to isolate the cause of damages, we question its practicality as well as its ability to withstand any judicial test. The draft regulations (50CFR part 296) at section 296.9 Proof, seem to imply alternate criteria, and the relative status of this criterial to 'presumption' is unclear. (See below.)

First, the Act assumes that all areas have been surveyed. The legislation calls for this to be done in 2 years, but according to testimony of the responsible agency, National Ocean Survey, it will take 5 years.* Further, the survey may be inexact for according to a USGS spokesman at Woods Hoke, there are torrential sandstorms that occur on parts of the sea bottom (60' - 80' in depth)

men will be compensated. It may be a worthwhile policy for the oil industry, to provide compensation, with a marker placed by the object to establish eligibility. The Offshore operator's association in the United Kingdom prefers to compensate fishermen for cutting their gear loose if hooked onto a pipeline with corresponding compensation. See below, op.cit. (North Sea Pipelines), NERBC, 1979, p.52. According to T. Kowalki & S. Salla, "Submarine Pipeline Studies", (in Olson & Grigalunas, "op.cit.", p.269-270) the damage or fracture of the pipeline is substantially more dangerous and costly than the damage to the trawl gear. They recommend abandonment of the gear at the point of force when the gear cannot be released without exerting more than 20% extra pull.

*Comment to M. Swain, Fishing representative and OCS Advisory Board member, of NOA official, Regional NMFS Hearing, Boston, Ma., Feb., 1979.

in the Georges Bank area.* Obviously, such storms will move objects as well as uncover them, and hence they will not be identified by the survey. Further, the fishing vessel on occasion will move objects, and then there is the question of a recognized location. It would seem to us that since the evidence is only inferred, and highly circumstantial, then any court test may rule it as inadmissible, given our long-standing tradition of 'Presumption of Innocence'. It then becomes a matter of 'will' - whether the oil industry will dispute the claim, rather than serving justice. Justice is a 2-way street, and if there is as practical a way to secure the evidence, then the Law should be formulated to provide this means. We believe there is. There are 2 possibilities. First, since the purpose of the survey is to serve the Law, then it would seem to be within the scope of Coast Guard activities to do the same by securing the evidence, if it is within practical means.**

*But much of the sea bottom is stable. See R. Black, op.cit., p. 57.

**According to our conversations with the Coast Guard it is not. Primarily, they are not equipped to retrieve the evidence, and the buoy tenders are at full capacity. We do feel the use of the buoy tenders is consistent with their mission, and if done on a select basis, it should not require extensive funding. In respect to the retrieval of evidence, this requirement can be dropped in view of an alternate method that is proposed below. But it should be pointed out that to equip the Coast Guard for this capacity would be providing them with useful tools in support of their overall mission.

This is not a salvage operation. Primarily, it is a marking operation, with identification and retrieval of intermediate sized objects* on a select basis. The Coast Guard would seem to be able to incorporate this as part of a routine police patrol activity with a designated area. The Coast Guard can verify the location of the object, secure a buoy to the object,** and at a later point in time,

*In the North Sea, the debris most often encountered by fishermen during trawling are: rubbish, oil drums, scrap metal, lengths of steel cable, steel superstructure, hawsers, steel pulley blocks, large plates, pipes, anchors, rails, concrete-filled drums, wire loops, pipe level turnings and heavy equipment which is less costly to discard than repair. See below, op.cit. (North Sea Pipelines), NERBC, 1979, p.54,56. Unlike in the Gulf of Mexico, the sediment makeup of Georges Bank will not naturally bury the objects. See. R. Black, p.57.

**A buoy can be initially provided by the fishing vessel. This is an inexpensive means. Based on remark of fishermen spokesman, M. Swain, Regional NMFS Hearings on Fisherman's Fund, Boston, Ma. The fishermen's buoy can be returned at dockside.

retrieve or identify the object if the hearing officer so directs them. It would require some training and specialized but needed equipment, which is also useful for their overall mission, e.g. booms, hauling and video equipment, etc. Coupling this approach with the survey will narrow significantly the occasions for this kind of investigation, since it will not apply to objects already identified by the Survey. Further, this approach will not encourage the bypass of the presumption of validity process, since it will be at the discretion of the hearing official. The other method would be to make available to the financially responsible party the option to identify or retrieve the object, with full cost of compensation if the object is non-OCS related. A third party would be available to witness the identification or retrieval of the object.

The advantage of the latter is that it makes available a means of redress, as well as providing an alternate method in the event the Coast Guard operation is impractical.

Thus we recommend that in the event the 'presumption of validity' is disputed there be added to the legislation the following amendment, at Section #404,

Burden of Proof

(5) the commercial fishermen attach a marker or buoy to such material, equipment, tool, container or other item and immediately notify the Coast Guard of the location of such marker or buoy, and the Coast Guard will, within 5 days, replace the fishermen's marker or buoy, with a lighted buoy or other suitable marker.

Disputed Means of Proof

That in the event presumption be denied within 5 days after the date on which the Hearing Officer was notified of such damages,

(6) The Coast Guard will, at the discretion of the Hearing Officer, either identify or retrieve the object purported to be the cause of such damages.

Alternate Disputed Means of Proof

(6)' The financially responsible party may identify or retrieve the object with a governmental witness, and shall be fully compensated for such costs, if said object is not OCS related.

We also recommend that Section 404 (2) at 'within 5 days' be amended to read "within 10 days" if the above amendment is not accepted, since it is impractical to expect such immediate compliance when there can be a variety of contingencies to go beyond this time.

Further, though Section 403 (c) (2) (A) assumes the identification of the object, the "Presumption of Validity" will discourage the identification. But notwithstanding this, either the identify may be disputed or the claim prolonged, delayed, or discouraged.* The Act makes available no recourse to resolve such impassible situations. Consequently, we recommend that it either be subject to the standard hearing process, or that the "Subrogation of rights" be extended to cover this provision. Thus if the hearing examiner agrees, after review by the identified financially responsible party, that the object is attributable to said party, then the Secretary shall acquire by subrogation all rights of the claimant against any person found to be

*In the North Sea, some companies have been very cooperative in consultations, but others have been less accommodating. In respect to debris damage, in Norway the state assumes the claim & seeks repayment from the responsible companies. Interview with official of the Aberdeen Fishing Vessel Owners' Association, in "North Sea Pipelines". A Survey of... & use conflicts in oil & gas pipeline operation", draft report, Section 3, consultation access & debris; the Fishing Issues, New England River Basins Commission, Boston, Ma., & EPA, Ohio, 1979,p.50,55.

responsible for the damages with respect to which such claim was made. Thus, we recommend that Section 403 (c) (2) (A) be deleted and the succeeding subsections be relettered from A to E, F deleted, while the following amendment is added after Section 403 (c) (1) as (2):

"The provisions of paragraph (1) of this subsection shall be disbursed by the Secretary, upon the direction of the hearing examiner, from the appropriate area account to compensate commercial fishermen, and the Secretary shall acquire by subrogation (Sec. 405 (h) (2)) all rights of the claimant against the damage set forth in a claim which was caused by material, equipment, tools, containers, or other items attributable to a financially responsible party."

Further, Section 405 (h) (3) should be amended to add

"as well as reasonable attorney fees" as a final clause after "...with respect to such claim."

REGULATIONS

We shall also comment on 50CFR Part 296, Pending Regulations, Staff Working Draft #2, Fishermen's Contingency Fund:

#1. - At Section 296.5, Claims Eligible for Compensation, Subsection (c), Exceptions (to Claims), subparagraph (1) should be deleted and inserted after (b) to read:

"Damages and losses are eligible for compensation if they were caused by materials, equipment, tools, containers, or other items of which the ownership is known or for which the responsibility is known."

#2. - The relative status of Burden vs. Presumption is unclear at 296.9, (a) Burden of Proof and (b) Presumption. The place of the titular designations are inconsistent with the Act. In the Act, Burden of Proof is a heading, whereas Presumption is subsumed, while in the Regulations they are of equal rank. The matter needs clarification. At any rate,

with the former, some actual evidence is needed; while in the latter none is necessary except the satisfying of circumstantial conditions. We suggest that this section be modified along the lines of the prior suggested amendments to the Act. Assuming that the designations remain in the same order, then (a) Burden of Proof would be available in the event of a dispute over Presumption, and the identity of location & identity or retrieval of evidence would be carried out by the Coast Guard at the discretion of the hearing officer; or the option would be available to the accused party to retrieve the evidence, with full compensation if the object is non-OCS related. In order to avoid loss of time, the Coast Guard would at the time of notification, verify the location of the object and replace the fisherman's buoy with a suitable marker to last a period of time, as mentioned in our suggested amendment to the Act.

#3. - At Section 296.9 (6) (2), "5 days" should be deleted and read "10 days", as suggested above with the Act, unless the above amendments are accepted.

#4. - At Section 296.10, (h), Prehearing Conference, in order to expedite the disposition of the proceeding, we recommend that the Hearing officer recognize and make available to the parties, subject to their agreement, a small cooperative but representative group of the 2 industries in order to resolve the claim, and report to the officer if agreement is reached (See Attachment # 7).

At 296.14, Subrogation, the provisions of the subrogation agreement should be extended to those claims, as amended, at Section 296.5, (c), Damage or Loss of Fishing Gear, to be included under (6) (non-exceptions).

In support of the above testimony to amend both the Act and Regulations, we submit the following: from NMFS Regional Hearings, Regulations on Fishermen's Contingency Fund, Feb., 1979.

Kenner, Louisiana; Boston, Ma.; Anchorage, Alaska.*

1. Participants recommended reporting time be extended to 10-15 days (La.) (hereafter, all underlines ours.)
2. Government should work with fishermen on establishing procedures for identifying moveable and non-moveable obstructions (La., Ma., Alaska)
3. Fishermen should not be required to have physical evidence or hire a diver to go down and identify the obstruction (La., Ma., Alaska)
4. Provision should be made in the Regulations that a Government agency will survey the area when it is a random-type hang to determine whether or not it is oil related. (La., Ma., Alaska).
5. Offshore operators recommend there should be physical evidence to establish nature of obstruction (i.e. retrieve actual object, bottom scan TV, site scan sonar, photographs, divers, etc. (La.)
6. Need a method through NMFS to pursue claim - fishermen cannot stop fishing to prove identification of obstruction. NMFS should have burden of proof. (La.)
7. Government should hire divers to investigate obstructions rather than fishermen having the burden of proof. (La., Alaska)

*The minutes of the NMFS Boston hearing were incomplete. I shall identify remarks from the Boston hearing, based on my staff's observations. All others are from the minutes of the Louisiana and Alaska hearings.

SUM

To sum up, we hold that the governmental reviewing agencies should realize that much of the offshore operation is standard and should be expedited without cause for delay, that the exploration and development plans filed are limited in the exactness that can be attained, since much of the operation is speculative. Though we hold that plans can be disapproved, there is a difference between a disapproval which only needs a modification to elicit approval, and one which is excessive in its concern to satisfy all parameters, or one which ultimately centers on satisfying a local but arbitrary interest. We hold that many initial development plans should be approved since a primary concern, OCS impacts of a magnitude due to voluminous finds, will occur at a later stage. We recommend that it is at this point in time that the area can and should be appropriately classified to constitute a major Federal action. It is only then that an EIS can be filed which gives consideration to the area as a whole, coordinating and ordering developments such that the onshore and offshore impacts will be minimized. Knowing that this evaluation is available at a later point in time, then the reviewing agencies should be less demanding in their evaluation of the initial plans that are filed. The other concern, exceptional geological conditions, is something all parties agree warrants a special review.

We view the transition between exploration and development as probably the most critical juncture of the process, and the section in the Act most deserving of a careful and cautious understanding. In order to assure that inexperience does not mistake its presence for wisdom, we recommend that regional, state and federal agencies in frontier areas be trained by an appropriate body to familiarize themselves with the experience of established areas.

We also hold that states have particular obligations to other areas beyond

their borders, namely Regional and National needs. Consequently, as a matter of checks and balances, we recommend that CZM plans be annually certified to assure that the CZM plans provide sufficient and flexible onshore sites to meet offshore needs, and hence avoid a parochialism that is offensive to the overall needs of the public. We find it particularly offensive if regional or special interests impose a point of view centered on their own satisfaction without consideration to the common good. This is why there is need for review at a higher level. This level has a responsibility to a greater interest. Balance is more likely to be assured.

We also hold that other parties, in particular localities, be permitted meaningful participation if they so desire, and that localities can deal directly but effectively with the party responsible for offshore waters, namely the federal government.

We hold it is time that environmental considerations be more positive, that safeguards should not be centered on defining standards to meet all parameters to handle the worst possible case; but should see the occasion as an opportunity to also develop nature by maximizing its renewability, realizing that a gain here will outstrip by leaps and bounds a forestalled negative impact which is unlikely, and for the most part only covers interim losses, but provides no lasting satisfaction for it does not lead to any improvement over what exists. This is not to recommend lack of concern in preventing such occurrences, but it does recommend against an unhealthy concern with negative possibilities.

We hold that the Fishermen's Compensation Act be modified in order to expedite the process so that compensation will not drag on, and at the same time assure justice for all parties. We take a certain pride in this

section since it was our testimony that initiated the legislation, and we are indebted to Senator Weicker for assuming the leadership by initiating the legislation in this area, to be followed later by Representative Studds in the House. We have a particular sensitivity to this section, since it is our fishing fleet that will be most affected by OCS development. In particular, we feel that if evidence is demanded to satisfy a claim, then one of the two modifications we proposed should be incorporated into the Act.

Also, even claims that supposedly pinpoint the identify of the responsible party should be covered by or made available to a ruling by the Hearing examiner since, in practice, such identity may be disputed. There is the need for recourse to a third party. We see no reason why the subrogation of rights cannot be extended to cover this provision. At the same time, justice must serve all parties, and consequently, one of the two options we proposed should be part of the Law in order to assure a redress of all parties.

Lastly, the Coastal Energy Impact Program should be modified so that the Secretary can move with due dispatch to provide for immediate needs and thus significantly reduce impacts.

CONCLUSION

We believe our statement is a balanced point of view. Though it favors the expeditious development of our mineral resources, it does not do so at the expense of the environment. We believe our point of view is realistic, giving consideration to what has occurred and not isolated effects, giving consideration to both interests - the economic and environmental. We do not view both interests as either mutually exclusive or such that one subordinates the other, though there can be priorities for different areas.

We advocate a relationship such that management considers development in terms of renewing nature. This point of view will not satisfy all parties - the industry, since it requires an additional consideration and possibly an alteration in their operations; the environmentalists, since it increases what we consider to be unlikely probabilities. But the kind of relationship we advocate means development can contribute not only to its special interest, but to the other as well. We believe that in the long run, this relationship will be beneficial to both parties, since one serves the other. Hence, development can be seen as complementing the environment, and thus the presence of that industry in the environment can be viewed as meeting a greater need, and hence the industry can be seen as needed. We are not so naive to expect returns, but maybe in the long run R & D will yield a return, which will then outstrip by leaps and bounds concerns over negative impacts. It is a point of view that attempts and fosters a positive relationship between development and the environment, which is a step forward, and a step in the right direction. It is quite unlike points of view which foster delays and delays, that are divisive and sap the will of the people and lead to confusion, discouragement and even a malingering malaise.*

While we may disagree on parts of the Act and question the need of some parts, we commend the legislators and staff for the OCS Act. It is an ingenious statement to address an area in need of supervision, that makes available limited but effective participation to those affected states and localities, providing standards that permit an ordered development in the interests of the environment. While we may have had differences

with the Commonwealth, we also recognize and commend our State for its contri-
 *In respect to our area, (& other areas) some say that the small amount of oil & gas is not worth the effort & the risk of possible consequences. If one is concerned about impacts, then the concern has to be proportionated to the volume of minerals anticipated. One cannot have it both ways. But this view misses an essential point. The need is a sum of parts, & the contribution of each is significant for in the aggregate each area's contribution is necessary to the sum. Otherwise, by analogy, we would have to write off each citizen's vote. The horizons for potential reserves are limited not only in # but in quantity. Consequently, the exploration of most areas is necessary.

bution to the formation of this Act. Let me conclude on the following didactic note. We believe the current situation is very grave in terms of providing a basic resource that meets our needs. We do believe a balance can be found so that development can proceed expeditiously without sacrificing the environment, in order to cover us in a limited way during this interim period. But it will require an effort and the will to proceed on the part of both the Secretary and the Congress. An act of will which goes beyond special interests and is willing to steer a course of action in the face of adversity, despite the disapproval of influential special interests, whether ideological or corporate, whose representation of the public is questionable. The American people at many levels, and throughout the States, are willing to make sacrifices and even alter some basic economies in the interests of what should be done.

Despite confusion and uncertainty, they are still trustful of their leaders and assume you will act in their best interests, the interests of the nation. They are divided but passive because of the complexity of limited alternatives and mixed interests.

But they are demanding and clear that a need must be met, and hence are open to a resolution to the course of action which leads in the right direction. They assume you have the will to strike down competing interests, to bypass them, to order them, and even favor one, whether it be corporate or not, if it is necessary. . Compromise may not be the right course of action, though it is more satisfying.

It is our hope that the Secretary realizes that his responsibility is the common good. Consequently, all parties that represent special points of

view have to be measured relative to a norm beyond their special interest, whether that interest be from the private or public sector, whether it be economic or environmental. That norm orders these interests, by either embracing one, some, or all of them, providing a balance in terms of priorities based upon what is good for man and the needs of the time, while placing limits on this when it appears that the course of action will lead to extremes.

I would also hope that the Congress would remind themselves that the Secretaries' interest is not their constituency, nor their regions, and that all of us have to ask ourselves if what I would like is in the best interests of all the people.

I thank you for this opportunity to testify.

JOHN A. MARKEY, Mayor
CITY OF NEW BEDFORD

Reference:

Robert B. Davis
Energy Advisor to the Mayor

OCS OVERSIGHT OF 1978 AMENDMENTS

MONDAY, MAY 7, 1979

HOUSE OF REPRESENTATIVES,
SELECT COMMITTEE ON THE OUTER CONTINENTAL SHELF,
Washington, D.C.

The select committee met, pursuant to notice, at 1:43 p.m., in room 1334, Longworth House Office Building, Hon. John M. Murphy, chairman of the select committee, presiding.

Present: Representatives Murphy, Hughes, Miller, Ginn, For-sythe, Livingston, and Lewis.

Staff present: Carl Perian, Lawrence J. O'Brien, Thomas Kitsos, Kate Bonner, Thomas Tackaberry, William McGuire, Robert Shea, Charles Holm and C. Grady Drago.

Chairman MURPHY. The committee will come to order.

On March 29, 1979, the House of Representatives voted to re-create the Outer Continental Shelf Committee in order to guarantee prompt and appropriate implementation of the OCS Lands Act Amendments of 1978. In view of that favorable action on House Resolutions 53 and 195, we convene today as a new entity—a select committee—to continue the process begun as an ad hoc select committee in 1975.

While we have indeed come a long way in the last 4 years in formulating energy policy, it is all too clear that there is a long way to go. Overseeing the promulgation of some 32 sets of regulations will be a stimulating and challenging task, and one of vital importance.

This country must deal with difficult problems if we are to obtain even a semblance of energy self-sufficiency:

Studies predict that the President's decontrol proposal will add only 200,000 barrels a day to domestic oil output by 1985.

While some industry sources predict a 1.1 million barrel-per-day increase in the same time frame due to decontrol, they also foresee a 9 percent decline in the rate of productivity in so-called old oilfields, with other industry estimates predicting a 23 percent decline in the production rate. As one publication recently speculated, it is unclear, " * * * whether even the industry's higher estimates would, in fact, be sufficient to reverse the current decline in domestic oil production."

On the natural gas side of the ledger, there is equal cause for apprehension and alarm. Industry remains apprehensive about the complex and intricate new regulations issued under the natural gas policy act.

For some 7 years, we have been grappling with plans for our energy future and—make no mistake about it—we are talking about our very economic survival.

Because of this uncertain future, the President has suggested a policy direction and has thereby become the third consecutive President to call for an accelerated OCS leasing program. In his April 1979 energy message, Mr. Carter declared: “* * * We will step up exploration and production of oil and gas on Federal lands.”

An elaboration of the President's remarks accompanied his statement, and was even more specific; setting the scene for our hearings today, it is worthwhile to consider the White House statement in toto:

Passage of amendments to the Outer Continental Shelf Lands Act last year provides the tools to pursue an even more ambitious offshore effort. The administration's new leasing schedule will offer more acreage for lease than in any other period in history. During 1976, 1977 and 1978, we offered 7.8 million acres; 14.5 million acres are proposed for 1979, 1980 and 1981. Final decisions on the pace of leasing will be made after statutory review and comment. The President is directing the Secretary of the Interior to propose additional acreage to that in the new leasing schedule.

Simultaneous to the issuance of the President's message came the stark news that a Senate report indicates that previous estimates of Saudi Arabian production have been exaggerated. At the same time, instability in Iran and the apparent willingness of OPEC to continue virtual price gouging also suggest a bleak future.

We must accelerate the prudent development of our Federal lands or face the consequences. It is fortuitous that the Congress, its critics notwithstanding, has anticipated and responded to this challenge by passing the landmark OCS Lands Act of 1978.

This committee intends to see that the OCS legislation is carried out—and carried out well. This afternoon, we commence the first of two afternoons of hearings on the President's energy proposal. These are the first of what will be a series of intensive oversight proceedings focusing on the key facets of the Outer Continental Shelf program.

We are particularly interested in discovering just how the administration intends to execute the President's directive with respect to the Outer Continental Shelf. Sadly, between 1953 and 1975, not 1 day of oversight hearings was held on this vital matter, and the country can ill afford a petition of that unfortunate record.

Some 17 percent of all domestic oil and gas produced now comes from Continental Shelf—about 18 percent of our oil and 15 percent of our natural gas. Prospects are that the U.S. Continental Shelf will be the largest increased domestic source of oil and gas between now and the 1990's.

During our March oversight hearings, we discovered that the present lease sale schedule will be inadequate to accomplish our national goals. In addition, testimony revealed a significant disagreement within the administration as to the makeup of the 5-year leasing proposal. It was estimated that the five sales a year proposal of the Department of the Interior would represent a loss of production of at least 1 billion barrels of oil or twice what is in the Elk Hills Petroleum Reserve. This was in contrast to a more ambitious Department of Energy proposal of seven sales per year.

We in Congress are anxious to do our part in expediting the OCS program. To do our part, we will closely scrutinize the full range of

outstanding issues which remain to be resolved. Today we begin that process with a renewed mandate from the full House.

Our first witness this afternoon is Mr. Loftis, who is representing the American Petroleum Institute. Please proceed, Mr. Loftis.

STATEMENT OF JOHN L. LOFTIS, JR., SENIOR VICE PRESIDENT, EXXON CO., U.S.A., ON BEHALF OF THE AMERICAN PETROLEUM INSTITUTE AND THE WESTERN OIL & GAS ASSOCIATION

Mr. LOFTIS. Thank you, Mr. Chairman. As you say, today I am representing the API, as chairman of the General Exploration Committee for Exploration Affairs. My statement is also co-sponsored by the Western Oil & Gas Association. We do appreciate having this opportunity to express our views on some of the key issues that can impact on the industry's ability to effectively explore for the oil and gas reserves which this Nation so badly needs.

First, I will briefly mention the effect of crude oil price decontrol on OCS production. Next, I will discuss our concerns about the draft proposed 5-year leasing schedule and industry's ability to accommodate a more aggressive program. Then I will review the proposal to allow prelease onstructure drilling and conclude with comments on "due diligence."

There has been much discussion concerning production increases which will result in crude oil price decontrol. Unfortunately, very little of the expected near-term production increase will come from offshore areas because of the long leadtime from lease sale to initial production. Most of the new offshore production for the next several years will come from tracks already under lease. New discoveries in the Gulf of Mexico can be producing before 1985, but new discoveries in other areas cannot be expected to contribute significant production until the late 1980's or early 1990's. Increased prices cannot shorten the time that is required to file the necessary plans and obtain the necessary approvals for and to physically accomplish the exploration and development cycle. However, increased prices will allow industry to pursue smaller prospects, explore in deeper water and conduct the expensive operations associated with harsh environments. This will allow development of more reserves and should have a positive impact on production levels after 1990. In order to maximize production from the OCS, it is necessary that the high potential basins, most of which are located in harsher environments, be leased as soon as prudently possible.

We are concerned about the draft proposed 5-year lease sale scheduled released on March 9. It is not designed to accomplish its stated purpose which is to best meet the national energy needs for the 5-year period following its approval.

The Secretary of the Interior solicited extensive data from the oil industry to aid in preparation of the leasing schedule. This data included a ranking by resource potential and by exploration interest for 22 areas of the OCS. From this data, composite industry rankings were developed. If these rankings had been properly used, the sale schedule would have contained sales in basins with the highest probability of adding significant reserves. In addition, a high level of competition and industry interest would have been

guaranteed. It appears that the sale schedule places too much emphasis on regional concerns and not enough emphasis on the national interest.

The proposed schedule contains 26 sales, not including 4 contingency sales, for the 5-year period. Nine of the sales are in the Gulf of Mexico. This is a mature exploration province where more than 5,000 exploratory wells have been drilled. Industry is very interested in having continued leasing in this area and a continued high level of competition is expected. Industry also expects to continue to make discoveries and add to reserves in the Gulf of Mexico. However, there is a very low probability that the Gulf will yield the major reserves which are so badly needed.

The greatest probability for adding these large reserves is in the high potential frontier basins. Of the 17 sales tentatively scheduled in areas outside the Gulf of Mexico, 10 are in lower 48 basins. Four of these are in areas contained in the lower half of the potential ranking. Of the six sales in the upper half of the ranking, three are in the mid-Atlantic and Santa Barbara Channel, where much of the undiscovered potential is assessed to be on acreage already under lease. Of the seven sales in Alaska, four are in basins ranked 16th, 17th, and 19th. The St. George Basin, ranked fifth, is only scheduled on a contingency basis. The Bristol Bay Basin, ranked sixth, is not scheduled at all. The schedule does not put enough emphasis on the high potential basins of the Bering Sea Shelf. The study performed by the Department of Energy to establish production goals showed that early leasing of the high potential Alaskan basins can have a significant impact on future OCS production.

Previous experience indicates that explorations in the frontier basins has a high geologic risk. Therefore, it is imperative that we determine as soon as possible which basins are dry and which basins are productive. If the schedule excludes some basins, particularly basins that industry feels have highest potential, the possibility of discovering significant reserves and establishing sizable production is greatly reduced. A priority system based on resource potential should be used to schedule sales in all basins.

Studies and surveys indicate that industry has the capability to accommodate a more accelerated leasing schedule. These surveys have covered all phases of the industry necessary for an exploration and development cycle. First, the industry can obtain the necessary geophysical data to prepare for the sales. Mobile rigs can be made available to conduct exploratory drilling. All phases of the petroleum equipment supply industry and support such as boats and divers have indicated their ability to accommodate a more aggressive OCS leasing program. The platform construction companies can build the platforms necessary for subsequent development of discoveries. In the past, industry has demonstrated its willingness and ability to expand its capabilities. Once the Department of the Interior has demonstrated its desire to develop a stable leasing program, industry will make any expansions necessary to accommodate the schedule.

In addition to these defects and deficiencies in the proposed leasing program, your committee should be aware of two recent developments which raise potentially serious problems regarding the early implementation of that program.

The first development is that the Department of the Interior has determined that it must prepare a programmatic environmental impact statement before the new leasing schedule can go into effect. Since the environmental impact statement process under the Environmental Policy Act normally requires a year or more to complete, we believe that serious doubt now exists as to whether the new leasing program can be put in place next January as planned.

We must also face the possibility that once it has been completed the environmental impact statement may be subject to time-consuming challenges in the courts as has happened so often in the past, having been challenged nine times since 1971.

We, of course, share this committee's hopes that the new procedures provided for in the 1978 amendments will reduce the number of such environment related lawsuits which have caused us so many delays. Whether these hopes are realized, however, remains to be seen.

The other recent development which raises a threat of new delays in the OCS leasing process was a recent preliminary opinion by the Justice Department that the Federal consistency provisions of the Coastal Zone Management Act is not limited to OCS exploration plans and development and production plans but may also apply to calls for the nominations of tracts, the selection of tracts for lease sales and perhaps other prelease OCS action by the Department of the Interior as well.

All we know about this Justice Department opinion at the moment is what we read in the press, but if this opinion becomes final in the form reported, it very likely will result in significant delays in the leasing process.

When more information becomes available, we recommend that this committee look into these two items which could potentially delay OCS exploration and development.

We are pleased that President Carter has recognized the potential of the OCS and on April 5 directed Secretary Andrus to propose additional acreage to that which is proposed on the draft 5-year leasing schedule. Pursuit of an aggressive OCS leasing program is the best course available to the Nation for the timely discovery of significant reserves. The concept of prelease onstructure drilling, which is being proposed in the revision to 30 CFR part 251, does not support an aggressive leasing program. Prelease onstructure drilling will delay and discourage efficient exploration and development. Consequently, it is not in the national interest and is one of the threats by regulation to the amendments objectives of expediting and facilitating the development of the petroleum resources of the Outer Continental Shelf.

The Department of Interior has indicated that prelease onstructure drilling will improve efforts to locate petroleum resources, improve the estimate of the undiscovered potential of the OCS and provide a basis for planning to meet future energy needs. These statements indicate a lack of complete understanding and a vast oversimplification of the exploration process. Some practical considerations which were either unknown to or disregarded by Interior follow.

One well will not evaluate even a single structure or trap. The record is replete with cases where two or more wells were necessary to make the discovery. There are other cases where the discovery well resulted in overestimates of reserve size and of course still other cases where reserves were initially underestimated.

Going a step further, it is obvious that one well drilled on one structure will not give an assessment of a province. Indeed, it is likely to be misleading. Here the record can be made even more convincingly with such sizable and important examples as the North Sea and the North Slope of Alaska.

Fifty dry holes were drilled in the northern portion of the North Sea prior to the discovery of Ekofisk as an oil discovery. Nine dry holes were drilled in the North Slope prior to the discovery of Prudhoe Bay.

In both of these instances, several companies with their own resources, both human and financial, compounded to achieve exploration success. Possibly the Government's experience in exploring NPR-A points to the negative implications on oil and gas discovery of a single exploring entity without competition. This carries with it a tendency toward singular geologic concepts and a relative lack of financial risktaking and staying power when compared to the competitive, multienergy approach of industry.

Since the study of the history of oil and gas discovery clearly demonstrates that prelease onstructure drilling is not the optimum way to initiate exploration in a frontier area and since the practice would have negative implications toward achieving the national goals for expediting discovery and development of its indigenous petroleum resources, it should not be undertaken. The Government has controlled the 24 million acres on NPR-A since 1923, a period of 56 years. In 1944, the Navy began its Petroleum-4 program, drilling 81 wells and core holes over a 9-year period. Twenty-four of these wells were drilled below 2,500 feet. In 1976, a second exploration and evaluation program began. To date, the Government has little to show except geologic data, after spending over \$500 million since 1976 for 16 wells, 13 of which were drilled dry and 3 are still currently being drilled.

The Secretary is attempting to authorize prelease onstructure drilling on the basis of section 11 of the Outer Continental Shelf Lands Act of 1953. During debate on the amendments, several changes were proposed, but all were rejected. The language in this section of the act was left intact. Under this section, no previous Secretary has authorized prelease onstructure drilling. We believe that the Secretary does not have the statutory authority to authorize prelease onstructure drilling, and therefore, valid regulations cannot be issued.

Once the industry has successfully leased acreage, there has been much discussion about the requirements which would be established for due diligence. Industry has been publicly criticized for failure to adequately explore its currently leased acreage. In January, API representatives met with the Secretary and discussed the status of exploration on leased acreage in the Gulf of Mexico. It was the opinion of API representatives at the meeting that Secretary Andrus was satisfied with the information received and felt

his questions and concerns had been addressed. However, some criticism of industry has continued.

A definition of diligence is extremely difficult to establish. In general, if a simple definition is established, it must assume a simple, clearcut exploration process. Unfortunately, this is not normally the case. The exploration of a prospect is a changing, evolutionary process. Tracts on a given prospect can be evaluated by a number of methods. Industry must explore as efficiently as possible, extracting the maximum amount of information out of every well drilled. This means that a tract on which no well has been drilled is not necessarily an unevaluated tract.

Frequently, prospects will extend across portions of two or more leases. One tract is usually more favorably located relative to the prospective geologic structure than the other. In such a case, the leases with acreage on the flank of the structure often will prefer to support the well or wells located on the most prospective acreage, rather than to initially drill wells on tracts with a much higher risk. In addition, with the drilling of wells after the sale, geologic interpretation can be significantly changed and frequently is.

The requirement for detailed exploration plans removes much of the flexibility from the industry. If a company is to explore as efficiently as possible, it must be able to adjust plans as new data becomes available. Industry's experience in the Georgia Embayment area of the South Atlantic illustrates the problems with these new regulations and with their interpretation and administration. The lease sale was held on March 28, 1978, something over a year ago now, and leases were awarded June 1, 1978, not quite a year ago. Certain companies began work on surveys and reports required for the exploration plan and permit to drill prior to the leases being awarded. During the period from August through December 1, 1978, the USGS was in the process of developing and issuing notices to lessees and establishing a new district office in Georgia. As a result of the USGS efforts to develop, issue, and interpret these new regulations and industry's ability to understand and comply with them, it appears that the first well in the South Atlantic will not be spudded prior to June or July of 1979. Thus this process has utilized over 20 percent of the 5-year lease term and is not indicative of our prior experience in the Gulf of Mexico where a well could be spudded within 1 or 2 months after a lease was awarded. These delays are certainly not conducive to timely development of the Nation's OCS resources.

It appears that the Department of Interior is avoiding the normal rulemaking procedure by issuing internal guidelines which establish due diligence requirements. Public Law 95-91 which established the Department of Energy gave the responsibility of establishment of diligence requirements for the operations conducted on Federal leases to the Department of Energy.

Due diligence requirements must be determined by practical considerations on a case-by-case basis. This procedure has served the Nation well and has resulted in rapid and efficient exploration and development of the OCS. Current trends are drastically departing from this successful system and placing unnecessary restrictions on the industry. Unless a more reasonable approach which allows

industry to efficiently evaluate leases is pursued, exploration is going to be delayed in the best case and made impossible in most of the frontiers if leases with only a 5-year term are granted.

From our testimony, it is obvious that we have serious concerns about our Nation's vital energy needs being aided by a strong and efficient OCS exploration and development program. If we do not place proper effort and emphasis on the items which I have discussed today, our national interest will be adversely affected. We appreciate the opportunity to express our opinion on the actions and plans which are necessary to accomplish our common objectives. I will be happy to answer any questions which you may have.

Chairman MURPHY. Thank you, Mr. Loftis, for your statement. We certainly appreciate it. We look over the basin rankings and we realize there is quite a difference between industry and the Geological Survey in the different areas ranked with the greatest resource potential. What, in your opinion, is the difference in that ranking? In other words, we see industry ranking Chukchi Sea 10th and the Geologic Survey up around No. 2 potential spot.

Mr. LOFTIS. I think, probably, Mr. Chairman, that the industry was more inclined to take into account the practicality of development based on today's technology than possibly the GS was. Our own assessment of the Chukchi Sea would be that the higher potential portion of this is in the deeper water that we do not think you could develop today if you found oil there.

Our own assessment takes into account how attainable these potential reserves are, and mostly you follow the definition that it could be developed under today's state of the art and technology.

And I would suppose that that is bound to be one of the major differences between them.

Chairman MURPHY. Your statements seem to indicate that we are not going for the top basin potential areas.

Mr. LOFTIS. Right.

Chairman MURPHY. Why would we not be doing that with the need so apparent for additional reserves?

Mr. LOFTIS. I really cannot answer that, Chairman Murphy. I cannot see, for example, why the St. George Basin is not included in this area. It is ranked fifth by both the industry consensus and by the Geological Survey, for an example. I see the mid-Atlantic in there ranked by both of them, but here, again, this is one of the areas that they have pretty well leased all of the prospects that are in the mid-Atlantic already.

Bristol Bay is ranked rather low by the GS which I do not understand. There again, by industry it is up pretty high. I do not understand why the Secretary has opted not to do this. Of course, the rumor sort of is that some of the folks up in Alaska think that some of these areas are too environmentally sensitive to go ahead with the sale. But of course, we do not really believe this is necessarily true. We think this industry of ours can operate in environmentally sensitive areas without any trouble.

I think that we have just got to get realistic and get some of these areas up. We thought first the northeast Gulf of Mexico—the company I work for at least thought it has a lot of potential. We drilled—spent a lot of money and drilled a lot of dry holes there.

The results today in the Baltimore Canyon are not too good. We thought, also, this was a good area. So even applying the very best that you have got to the assessment of these things, as you can see, they are far from perfect.

So what you have to do is you have to go ahead and look in all of these places. They could all be dry. But on the other hand, the next two or three of them could be productive as well, and that is what we are trying to do.

Chairman MURPHY. With the environmental requirements that were placed in the Outer Continental Shelf Lands Act Amendments, why would the Interior Department not schedule on the basis of potential, realizing that the environmental protections after the lease sale are still in effect to protect any environmental problems in those areas?

Mr. LOFTIS. I cannot answer that. Possibly you would prefer to ask that question to some of the other witnesses here from the Government. I just do not know.

Chairman MURPHY. Mr. Miller?

Mr. MILLER. Thank you, Mr. Chairman, and I must just comment on your last question. I hope that is one of the things we are able to do in the capacity of oversight of this committee is to take the new law as written which supposedly had an intent and to match that against the actions to see where the deviations are and not to determine how we might rewrite the law but how we might make this one work, and I think that that kind of question is very important.

If we set up environmental safeguards and we set up procedures to carry them out, then the assumption would be that almost every area is available for nomination within that framework. If you do not like the framework, then come back and give us the charge for another legislation.

Mr. Loftis, let me ask you something. On page 9 of your statement you say that due diligence requirements must be determined by a practical consideration on a case-by-case basis. Are you suggesting in that and in the previous sentences that that is not what is being done now? And if so, is that because of the new due diligence requirements of the law or is it a concern that that will not be done? Is that speculation?

Mr. LOFTIS. It is a little bit of both, Mr. Miller. I guess our only real encounter has been in the Santa Barbara Channel, and of course, those are some of the leases that were actually issued in 1968 or held up because of the Santa Barbara oilspill and delays and that sort of thing.

But we were allowed to form units and we have certain contracts in these units. The administration at that time gave us assurances of what we would have to do to maintain these, and now we have gone back to Interior and asked to do other wildcatting on the Santa Ynez unit, and this has been agreed to provided we will agree to drill a well on each and every field, as they call it. They are not fields as yet. They are prospects located on the unit.

But they want us to keep a rig active on each of these, and this gets to be very, very unreasonable. There is not that much rig capacity in the Santa Barbara Channel. It is a violation of our

contractual rights, and all of this is being served up to us as a part of due diligence.

We think it is very unreasonable, and is not directed toward the primary aim of what we are all trying to do, and that is find some more oil and gas for this country. This is really a deterrent to that.

Mr. MILLER. Let me interrupt you there because you hit upon what was my second question. Again, from what you have just said, and it is in your written statement, but I cannot find it, you are suggesting that the department is interpreting the due diligence requirement as placed in the new legislation, the new law, that would require the establishment of a drilling platform, production platform, on each and every tract, is that what you are saying?

Mr. LOFTIS. I am saying in this instance where we have not found anything on these particular prospects, they are saying we will give you this permit and you can hold this lease as long as you drill a well no more than 90 days between cessation of drilling and the commencing for a second well on each of these three areas.

Mr. MILLER. Are you suggesting that you have another method by which you can tap the resources?

Mr. LOFTIS. I am suggesting we have a contract that says that as long as we are drilling one well anywhere on this unit it maintains the entire unit.

Mr. MILLER. I see.

Mr. LOFTIS. And we will do this for a period of 10 years after production is commenced which it has not done, as you know, on the Santa Ynez unit in the Santa Barbara Channel.

Mr. MILLER. Is it your reading, then, that that is the requirement of law or is that a requirement of rulemaking under the law?

Mr. LOFTIS. Well, it is very clearly our idea that the rulemaking deviates from the intent of the law.

Mr. MILLER. Thank you very much.

Chairman MURPHY. Mr. Forsythe?

Mr. FORSYTHE. Thank you, Mr. Chairman.

While we are on due diligence, let us continue a little. As a matter of fact, is it not true that the due diligence requirements are now being made part of leases rather than regulations that are to be done in compliance with the law by recommendation of the Department of Energy. And isn't it true that the Department of the Interior has gone ahead without action by the DOE. Do I mislead you?

Mr. LOFTIS. No, I understand.

Mr. FORSYTHE. Well, is that correct that this is occurring?

Mr. LOFTIS. It is my understanding, and I believe I saw a copy of a letter you had written to Secretary Andrus outlining his transgressions in that regard. Actually, this is supposed to be a function of DOE.

Mr. FORSYTHE. So far as I know, there are no due diligence regulations that have actually been promulgated, and what you are facing now is kind of extra the regulation process.

Mr. LOFTIS. That is right.

Mr. FORSYTHE. Let us go a little further into this case by case that you mentioned. Do I understand that you think that any kind of blanket set of regulations so far as due diligence is concerned would require that you drill on all prospects as you described them

in order to maintain due diligence, cannot be applicable to the real world as far as oil or gas production is concerned?

Mr. LORRIS. I do not believe, Mr. Forsythe, they are the best regulations in the world to do that. What I mean by case by case, obviously if you see a lease on a well-established oil province such as the Gulf of Mexico differently from the way you would look at one up in the Gulf of Alaska or the Bering Sea.

In the Gulf of Mexico, I think it is reasonable, that within the 5-year term of your lease you can decide whether you have got commercial production or whether you have not, and if you have, you should have it reasonably well defined and you should be able to file a plan of development.

Now, you got to understand that the law itself does not protect you just for having a development plan. This is done by regulation and by the Secretary of the Interior as well. If you got a 5-year term lease, you are supposed to have this thing on production or to be continuously drilling to maintain that lease.

But the Secretary has said that if you file a development plan that is acceptable to him, prior to the expiration of the 5-year term, then he will extend your lease while you are getting the hardware and getting it installed and getting the wells drilled and bringing it on production.

But if you move this thing up into the harsh environment off of the Alaska coast and you use that same 5-year term lease, now, the Secretary, mind you, does have the authority to give longer term leases there up to 10 years, and I certainly hope that he will, but if you got a prospect that has got five leases on it, and it never has been practical, and I am sure everyone can understand this that to drill every well that is bought at every sale at the same time just does not work.

You have got the rigs that can do this over a schedule and a programed period of time and you go them one at a time. Look at the outcome of one, and then decide where you are going with the next one.

In the event of discovery, to have this thing sufficiently defined in a 5-year time period in the waters of Alaska is just unreasonable. So you have got to have a due diligence rule that says, you know, we will be reasonable in all cases, not just to have some man tell you I will be reasonable when the time comes. You have got to have better assurance than that.

And that is what I am getting at when I say due diligence trying to establish these before the fact can lead us down the primrose path. I do not think it is very practical.

Mr. FORSYTHE. It has been charged that industry wants to increase its inventory of real estate in leases without any regard as to whether it has explored existing leases. What is the rationale for the need to continue expanding the lease bases, the inventory of leases, when all current leases have not been explored?

Mr. LORRIS. Well, the normal intention, although it has been questioned, is really an honorable one. I guess most people today feel like that, for example, the Gulf of Alaska, there have been enough dry holes drilled on enough structures there that this is not the Holy Grail. So we need to look somewhere else.

I guess we are about to come to that conclusion about the Baltimore Canyon. Although you might still find something there, it still cannot be very big. What most people are trying to do is to spread this thing out and look at the other frontier areas that are regarded to have high potential and see if we have got it or if we have not got it, Mr. Forsythe.

Believe me, it is not any desire on the part of anybody to hold more real estate. This costs you \$3 an acre per year just for paying the rent. So nobody is doing this just to gain more land. This is not the purpose of it at all.

Mr. FORSYTHE. Yes, \$3 per acre per year, to say nothing of the bonus payments—

Mr. LOFTIS. That is right, and you get your tax writeoff when you drop that of course.

Mr. FORSYTHE. Again, the due diligence these standards as prepared by DOI, what would they do to the price of hydrocarbons that you hope to produce in the OCS?

Mr. LOFTIS. I do not think I would care to hazard a guess and quantify that on how much it would cost. I do not believe I could give you a real sensible and practical answer to that.

Mr. FORSYTHE. Well, take that Santa Barbara case that you described where you would be asked to put rigs on all of the tracts. Would it not substantially increase the cost of production?

Mr. LOFTIS. Yes, it would increase the cost of discovery if we found something. Of course, it is going to cost our company more if you drill a bunch of dry holes, but I do not think you can translate this into necessarily what it would add to the cost of a barrel of oil. I could not quantify that.

But obviously, there is an additional cost to the whole process. The whole point is it is not a sensible approach to the problem, if the problem you are trying to work is to find oil and gas. Now, if you are not trying to find oil and gas, that is a pretty good scheme.

Mr. FORSYTHE. We are all far astray if that is where we are. I have heard it said that the production per foot of well drilled, for instance, has fallen off remarkably in this last 5 or 6 years. Is that a true statement? In other words, you expect to get about x production per foot of well drilled over the average and that that is a falling curve these days.

Mr. LOFTIS. I have not reviewed that kind of a presentation in some time, but if you go back to the year 1, then obviously that is exactly right, that you find less and less oil, and I guess this would be almost true in any sort of an expendable resource, the more you find and the more you produce, the less there is left to find. So I expect that is right, although I have not seen any real recent statistics presented in that way.

Of course, drilling, as you know, is up substantially with the higher price of oil and gas, the total number of exploratory wells as well as spill wells.

Mr. FORSYTHE. But reversing that curve of falling U.S. production still continues?

Mr. LOFTIS. I think it is not likely to reverse itself.

Mr. FORSYTHE. Even if we were to find the best we could hope for in the OCS or in Alaska?

Mr. LOFTIS. I am a geologist. So I would not dare say this is impossible, but I would say it is unlikely.

Mr. FORSYTHE. On this 5-year leasing schedule on which there has been a fair amount of discussion before this committee in previous hearings, do you believe that we can come any where near increasing production with a proposed schedule as has now been announced by the department?

Mr. LOFTIS. No, sir.

Mr. FORSYTHE. And you firmly, and you have stated in your statement that the industry is able, ready and willing to conduct an expanded program considering capital, considering rigs and the ability to operate on an expedited schedule.

Mr. LOFTIS. That is correct.

Mr. FORSYTHE. I believe you said in your statement the industry did ask you for considerable input. The DOI asked industry for considerable input into this 5-year leasing schedule.

Mr. LOFTIS. Yes, sir.

Mr. FORSYTHE. But largely have ignored it, ignored the industry input. Is that what you are telling us?

Mr. LOFTIS. They either ignored it or they gave greater weight to somebody else's input, one or the other.

Mr. FORSYTHE. You did not see too much of your marks on it, is that right?

Mr. LOFTIS. That is right.

Mr. FORSYTHE. Thank you, Mr. Chairman.

Chairman MURPHY. Mr. Hughes?

Mr. HUGHES. Thank you, Mr. Chairman, and thank you, Mr. Loftis. Some of the figures that I have seen would indicate that we have something like 16 million acres now in the hands of industry. Given capital constraints and the availability of rigs and other materials used to explore in the Outer Continental Shelf, how does your company determine priorities as to what areas to commit capital and rigs to?

Mr. LOFTIS. Do you mean whether we decide to explore with it or build refineries with it, is that the kind of question you are asking?

Mr. HUGHES. Well, that is one aspect of it. The second aspect would be, since you have, obviously, more acreage than you can explore at any given time, you have got to determine some priorities as to whether you commit rigs to the Baltimore Canyon or whether you commit them to Louisiana or Texas.

Mr. LOFTIS. I think that is far from obvious. We have got rigs committed to every where that we own acreage that we do not feel that we have reasonably evaluated. What we set out to do in everything we do is to do our business in a businesslike manner, and we drill wells, as I said earlier, I believe before you came into the committee hearing, that it is just not feasible to drill every lease you have, as you can understand, the day you buy the lease. This would be an unreasonable approach. You would need a bunch of rigs for 30 to 60 to 90 days, and then you would not need them for a long time. It has to be scheduled. It has to be scheduled to take care of the equipment.

It has to be scheduled so that you can reinterpret and rethink before you start spending that extra \$6, \$8, \$10 million to drill another well. But we do not have any—I wish we had a larger

inventory of good drillable prospects than we have, Mr. Hughes. I really do. We are pretty well drilled up.

Mr. HUGHES. Well, my question, more specifically, was how you determine your priorities.

Mr. LOFTIS. Let me talk to the exploration part of our business. We look upon this as a business of opportunity, and where we see opportunities we try to grade them and if we are limited for any reason, of course, we try to go for the one that looks the best, and it is as simple and forthright as that.

Mr. HUGHES. For instance right now Exxon has what? One rig in the Baltimore Canyon?

Mr. LOFTIS. Well, we have got one rig, and we are joining Tencoco with the drilling of another well, and we just got through contributing to a gulf well. So we were active on three or four wells there at a time, and we have just recently abandoned another dry hole in the Baltimore Canyon which was another rig. So at one time we were participating in four wells in the Baltimore Canyon. We bought 30 leases.

This is an area where very definitely you are not going to drill on every tract unless it produces, and as you know, the results there have not been all that encouraging.

Mr. HUGHES. Of course, Exxon has some tracts they have not committed any rigs to at the present time in the Baltimore Canyon, do they not?

Mr. LOFTIS. No question about that, and there will be some that we will allow to expire without ever drilling a well on it.

Mr. HUGHES. And even those tracts where you have committed rigs, you can, as I understand it, move it 400 or 500 yards and strike a structure.

Mr. LOFTIS. And do what, sir?

Mr. HUGHES. And hit a structure after sinking a dry well 400 or 500 yards away. It is that complex. Is that an accurate characterization?

Mr. LOFTIS. Well, that is a possible characterization. The thing out there, you work yourself down to size where there is not enough left for it to be economically feasible, Mr. Hughes. Sure, you can make a case that you could still find an oil or a gas field there when you had a well on every 40 acres if you drilled it down finer than that.

But it takes quite a bit of a productive area there to justify building a platform and a pipeline together.

Mr. HUGHES. I understand that, and I understand that you could not possibly commit a rig to every aspect of each tract. Tracts run what?

Mr. LOFTIS. 5,000 acres.

Mr. HUGHES. 5,000 acres per tract. But the point I am trying to make and what I am trying to find out is how you determine, for instance, whether to commit additional rigs to the Baltimore Canyon trough area or to an area in Louisiana, let us say, where there is a higher potential. How do you make those value judgments?

Mr. LOFTIS. Well, we do not make either one of those in a vacuum. We do what we think is the proper way to do it in both places. Now, we first went to the Baltimore Canyon with one rig

with the idea that if we found something on our first well, which believe me we fully expected to do, as you know we had over \$340 million invested in leases there, we had planned then to greatly build up our rig capacity there as rapidly as we could.

But we drilled a \$32 million dry hole with our first well there, and of course, this took a little bit of our enthusiasm away.

Mr. HUGHES. It might have saved you some money if we had an onstructure well right there, would we not?

Mr. LOFTIS. Had an onstructure well?

Mr. HUGHES. Onstructure, yes. It might have saved you some capital.

Mr. LOFTIS. Yes.

Mr. HUGHES. That you could have used somewhere else.

Mr. LOFTIS. Yes, probably would, probably would, but it would not have found us any oil either, would it?

Mr. HUGHES. I do not know. It depends on where you moved that rig to. You might have moved it some distance away and found some oil. That is what we are trying to find, is it not, oil?

Mr. LOFTIS. Yes. Are you trying to ease me off into onstructure drilling here?

Mr. HUGHES. We are going to get there eventually.

Mr. LOFTIS. All right. Let us go. [Laughter.] Let us just be sure we know what we are doing. Let us not ease into it.

Mr. HUGHES. I think you see the drift.

Mr. LOFTIS. OK. You know, I think you and I ought to sit down sometime and really go at this.

Mr. HUGHES. I would like to do that sometime.

Mr. LOFTIS. All right. Let us do it.

Mr. HUGHES. Let me ask you a question about onstructure, since we are on the subject. You indicate on page 7 of your statement that you believe the Secretary does not have the statutory authority to authorize prelease onstructure drilling, and therefore, valid regulations cannot be issued.

Mr. LOFTIS. Yes.

Mr. HUGHES. Do you believe that the Secretary has the authority to issue permits for off-structure cost wells?

Mr. LOFTIS. I think this is debatable, but it is sort of harmless.

Mr. HUGHES. Well, Exxon is taking advantage of that particular regulation.

Mr. LOFTIS. Not really. Like a lot of things, we are against it in principle but we are afraid not to join it when they finally get underway.

Mr. HUGHES. I suspect you would be the same way when it comes to onstructure stratigraphic testing, too, would you not?

Mr. LOFTIS. Well, I just do not know. We have not lived in that world yet, and I hope we never will.

Mr. HUGHES. I see. Well, you do agree that Exxon or any oil company does not have to accept any permits offered by Interior to sink onstructure wells?

Mr. LOFTIS. No. And of course, I think this may be the real world that it is going to be very difficult to get anybody to take this. You know it is not a real strong incentive for somebody to go spend their money to drill a well and then give all the information to everybody else.

Mr. HUGHES. Would you agree that some oil companies are going to avail themselves of that opportunity for onstructure wells if they are given that privilege?

Mr. LOFTIS. Well, I do not have any idea whether they will or they will not.

Mr. HUGHES. Well, we have had oil companies that indicated they would.

Mr. LOFTIS. You have?

Mr. HUGHES. I presume that that would be the case. Under those circumstances, Exxon would find itself in the same position it is in with cost wells, offstructure wells.

Mr. LOFTIS. Are you telling me or asking me?

Mr. HUGHES. I am asking you.

Mr. LOFTIS. I do not know. I just do not know.

Mr. HUGHES. Well, thank you. I appreciate it.

Mr. LOFTIS. You bet. [Laughter.]

Chairman MURPHY. Mr. Livingston?

Mr. LIVINGSTON. Thank you, Mr. Chairman.

Mr. LOFTIS. Since we are on the subject, and I see that it is one of your favorite topics, are you aware, sir, of any nation in the world that utilizes prelease onstructure drilling?

Mr. LOFTIS. No, I do not believe that I am.

Mr. LIVINGSTON. Would you care to speculate, sir, to the best of your knowledge, since it is not utilized by any other nation and industry around the world appears to be opposed to it, why the Department of Interior insists that it is an absolutely vital tool for our OCS program?

Mr. LOFTIS. Well, obviously, I cannot understand what their rationale is. It sort of smacks of the old concept that a lot of people wanted for a dual leasing program, and this was described as being a noble attempt to speed up the whole process and find out if there was any oil before you worried about the environmental concerns, and you sort of get the notion that maybe this is a fallback position for the people who espoused this kind of a business.

Mr. LIVINGSTON. What effect, in your opinion, sir, would that dual leasing program have on our ability to produce oil offshore?

Mr. LOFTIS. There is no way but that it would delay it enormously, and I think onstructure drilling will do the same thing.

Mr. LIVINGSTON. Well, do you see any circumstance where prelease onstructure drilling would be a benefit to the acceleration of production to the Outer Continental Shelf hydrocarbons?

Mr. LOFTIS. No, sir, I do not.

Mr. LIVINGSTON. None whatsoever?

Mr. LOFTIS. No, sir.

Mr. LIVINGSTON. Getting back to the proposed 5-year leasing, sir, could you give us an idea what you believe would represent an accelerated leasing schedule that would not only increase production but would expand exploration into the frontier areas?

Mr. LOFTIS. Well, this is a difficult thing for me to speak to as a representative of API because different companies would have a different concept in this. I guess I would prefer not to commit the whole industry to how many lease sales they would like to have, except to say we can sure afford more than we are having. We

could have a better mix of frontier areas included with the Gulf of Mexico.

One of these days, the Gulf of Mexico is going to give out. I have been saying that for a long time, but it has just got to. But we need a lot more frontier areas exposed to industry so we will have a chance to find something that is large and something that would really impact and be of help to this country.

Mr. LIVINGSTON. You do not want to express your own personal opinion?

Mr. LOFTIS. About how many sales a year?

Mr. LIVINGSTON. Yes.

Mr. LOFTIS. Well, I think the mix is more important, but I think that this industry is capable of handling six sales a year. This is a personal opinion. And they ought to be spread out, not three of these in the Gulf of Mexico, and one in the mid-Atlantic and that sort of thing. You need to get some of those goodies off of Alaska up there.

Mr. LIVINGSTON. How about commenting on, perhaps, the optimum spacing or timing of lease sales, would you like to comment on that, sir?

Mr. LOFTIS. Well, you are talking about—I think if you take the process as a whole, then you are much better off to spread these things out equally throughout the year. For example, this lease scheduled, the latest one that has been circulated to the affected States, has every one of the sales in the last 4 months of the year.

This puts a tremendous pressure on the technical people that prepare for these sales, and going through all of the administration in getting a bid level approved that this sort of thing. It is a very difficult thing to do.

It would seem to me for the Government trying to get a little more money would better spread these things out a little bit more within the year and let people sort of get their breath again after the last one.

Mr. LIVINGSTON. Thank you very much, Mr. Loftis.

Thank you, Mr. Chairman.

Chairman MURPHY. Mr. Lewis?

Mr. LEWIS. Excuse me, Mr. Loftis, for arriving late in your testimony but I wonder if you would respond relative to the development of this decision to go ahead with programmatic environmental impact studies.

[Pause.]

Mr. LIVINGSTON. Mr. Chairman, I misled my colleague here. We are comparing notes.

Mr. MILLER. Mr. Chairman, if I could in the meantime ask a question that follows up on something Mr. Forsythe said.

In your statement at page 8 you said that API representatives met with the Secretary to discuss the status of exploration on leased acreage in the Gulf of Mexico, and the Secretary was satisfied. What took place at that meeting in terms of information that was made available?

Mr. LOFTIS. I was not there, but I presume it was sort of a general discussion that tried to explain to the Secretary the good and valid reasons people have for having leases that have not had a well drilled on them.

If you buy a lease on the offshore, you buy it with the intention of drilling there as soon as you can. You normally have a pretty heavy investment in it. You have a rental bill to pay, and I guess it is almost unbelievable that anybody could think that the industry is actually buying these and hording them. That is the furthestest thing from our minds as a good objective in running our business.

What you want to do is to evaluate these as rapidly as possible, but at the same time, you want to do it prudently. And if you own this lease over here, and you are drilling a well, I am better off—and I own the offset—I am better off to help you drill that well and see your well down first before you drill there and I am drilling here at the same time. And there is a lot of that sort of thing.

As I understand it, this meeting with the Secretary and API, and as I say I was not there, was that I think they just went into these commonsense type things that cause people to have leases that have not got wells drilled.

Mr. MILLER. Has there, in fact, been an increase in the amount of activity or drilling in the gulf recently?

Mr. LOFTIS. I would say not because there were some large sales that were very productive sales held in 1973, 1974, and 1975, and since then the things that have been put up for lease have been smaller.

Mr. MILLER. There is a lot of new rig construction going on in the gulf, is there not, as I understand it, for use in the gulf, is what I have been told?

Mr. LOFTIS. Yes, there are, for platform drilling that this sort of thing, yes.

Mr. MILLER. Thank you.

Chairman MURPHY. Mr. Lewis?

Mr. LEWIS. No questions.

Chairman MURPHY. Mr. Ginn?

Mr. GINN. No questions.

Chairman MURPHY. Mr. O'Brien?

Mr. O'BRIEN. Mr. Loftis, what impact will the proposed windfall profits tax have on OCS development? Let me read you a statement that was contained in the trade press that prompts my question.

Mr. Don Fernow of Thompson, McKeenan said:

Unless a significantly revised tax scheduled is introduced into the energy bill, the administration's windfall tax proposal would have a clearly regressive impact on high risk exploration such as is needed to probe at great depths or on frontiers where large new oil and gas reserves are likely to be found.

Mr. LOFTIS. Well, we are really talking about dollars to spend for exploration. Whether they come out of decontrol of oil or whether they are lessened by a windfall profits tax, we are talking about dollars to spend to look for oil, and the risk and what you get for extra dollars, is that your question? Does it make any difference whether it is windfall profits tax or whether it is less dollars for a barrel of oil?

Mr. O'BRIEN. Roughly, yes.

Mr. LOFTIS. Well, there are places—let us talk about where you could find big oil first. I think that is the important thing. There are places where the more dollars you have to spend the more risk you can afford to take, the smaller the fields that you can develop

that you could not develop if you had less dollars or profits or so-called windfall.

I think, if you are talking about a real good prospect in a low cost area, I am not sure that this would have a real significant impact on whether or not you drilled a wildcat well on a good prospect on whether you had an extra tax on it or not. I just do not know. It is hard to answer unless you have a specific, have the specifics of it.

Directionally, though, you are going to find more oil, you are going to develop more oil for the more dollars that you get to keep to spend on looking for oil.

Mr. FORSYTHE. Would the counsel yield on that question?

Mr. O'BRIEN. Yes, sir.

Mr. FORSYTHE. But I think your testimony has already indicated, and certainly history has, that we are now looking at more expensive frontiers.

Mr. LOFTIS. No question about it.

Mr. FORSYTHE. We are looking at higher costs everywhere we go. And therefore, lack of capital formation through profit and other things are going to impede on the ability of industry to look for that higher cost oil unless the revenue is going to get put in.

Mr. LOFTIS. No question about it.

Mr. FORSYTHE. And anything that is taken out of this pot has to hurt. Thank you.

Mr. LOFTIS. The only reason I testified to that, a large amount of money is put into bonus to buy one of these leases. One way you work the problem is, you just don't pay the Government much bonus for it.

The CHAIRMAN. Thank you very much, Mr. Loftis—wait a minute.

Mr. LEWIS. I now have my own questions, rather than somebody else's.

As long as we have Exxon present today, there was a lot of activity in California, as well as on television, and some questions were raised that maybe you could respond for the interest of the House, if not specifically this committee, about refining capacity, and the level at which we are using our refineries in this country.

Some language came forth that big oil was not using their refineries domestically at the percentage levels they should. You may not have in your hip pocket the details, but I wonder if you could respond and give me some information.

Mr. LOFTIS. You are exactly right, I do not have the specific information. But we have been and are working all the gasoline they can prudently make at our refineries. We are in the business to furnish the country's needs, to run its automobiles, and that is exactly what we do.

We can make all the gasoline we can. We are not going to keep making gasoline and not stockpiling the oil, and let people freeze up here—

Mr. LEWIS. It has been suggested that the Government should play a role in pressuring you to get on with accelerating refining before we get into the summer months, which could put us into a crisis situation later on in the year.

Mr. LOFTIS. I do not have the specifics, but I don't believe that this would be very rewarding in our case for the Government to put pressure on us.

Mr. LEWIS. It has been said that in the last decade, at least in the Western States, no refineries have been developed at all.

Has Exxon applied for expanded refining capacity domestically?

Mr. LOFTIS. Yes. As a matter of fact, we did try to get a permit at one time for an expansion on our Benicia refinery.

Mr. LEWIS. Is that in the West?

Mr. LOFTIS. Yes; in the San Francisco area.

Mr. LEWIS. Thank you.

The CHAIRMAN. Thank you, Mr. Loftis.

Before we call up our next witness, those people standing in the back of the room, if you would like to come up here and utilize the lower tier, we have about a dozen seats.

Why don't you come up and sit down?

Our next witness is Ms. Heather Ross, Deputy Assistant Secretary, Program Policy and Budget Administration. She will be accompanied by Mr. Don Truesdell and Mr. Al Powers.

STATEMENT OF MS. HEATHER ROSS, DEPUTY ASSISTANT SECRETARY, PROGRAM POLICY AND BUDGET ADMINISTRATION, ACCOMPANIED BY DON TRUESDELL, ACTING ASSISTANT DIRECTOR, MINERALS MANAGEMENT DIVISION, BUREAU OF LAND MANAGEMENT; AND ALLAN POWERS, DIRECTOR, OUTER CONTINENTAL SHELF PROGRAM COORDINATION

Ms. Ross. Mr. Chairman, it is a pleasure to be here today for the third oversight hearings to be held by this committee. We are pleased to have the opportunity to discuss with you the Department's plans to meet President Carter's directive to pursue a more ambitious offshore effort.

On March 9, Secretary Andrus distributed for review a draft proposed lease schedule. It covers the 5-year period ending in February 1985 and contains 26 potential sales plus 2 contingency sales in the Gulf of Mexico and 2 second category sales off Alaska. By second category we mean special recognition that while it may not turn out to be appropriate to hold a sale there until after February 1985, we believe it is important that the relevant studies be started now.

As part of his second energy message, President Carter directed the Secretary to propose additional acreage to that in the draft schedule in an effort to provide additional domestic supplies of oil and gas. As a followup, Secretary Andrus provided guidance to departmental officers on how the directive on the OCS program was to be met. He instructed us to investigate the possibility of moving to frontier areas faster than proposed under the March draft. This includes investigating how much more quickly we could move into those areas if additional dollars and people were provided to the program. I would like to submit a copy of his guidance for the record.

The CHAIRMAN. That copy will be printed in the record right after your statement.

[The following was received for the record:]

U.S. DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington, D.C., April 12, 1979.

Memorandum to: Solicitor; Assistant Secretary, Land and Water Resources; Assistant Secretary, Energy and Minerals; Assistant Secretary for Fish and Wildlife and Parks; Assistant Secretary, Policy, Budget and Administration; Director, Bureau of Land Management; Director, Geological Survey; Director, Fish and Wildlife Service.

From: The Secretary.

Subject: President's Energy Message—Enhance Production from the OCS.

On April 5, 1979, President Carter delivered his second Energy Message to the Nation. As part of his program to obtain additional domestic supplies of oil and gas, he has directed me to propose additional acreage to that in the new 5-year OCS leasing schedule. The portion of the fact sheet addressing the OCS program is attached.

With this memorandum, I am instructing Assistant Secretary Meierotto to develop alternative leasing schedules which meet the President's directive, in conjunction with development of the proposed 5-Year OCS Oil and Gas Leasing Program to be submitted to the Congress, the Governors, and the Attorney General this June. I want him to investigate the possibility of moving into frontier areas faster than proposed under the current draft, if additional resources are allocated to that effort.

I believe that what the President expects is for us to increase the chances of producing more OCS oil and gas in order to reduce reliance on insecure and expensive imports. Thus, in following the President's directive, the quality of the areas offered for leasing is as important as the amount offered. For this reason, I want to be certain that we make the best effort we can to move quickly into frontier areas where the potential for hydrocarbon discovery is highest.

I request that you give Larry Meierotto and his staff your full support in this very important effort.

Attachment.

3. Enhanced production from federally owned lands OCS and NPR-A (National Petroleum Reserve in Alaska) OCS leasing schedule

The President emphasized the importance of exploring and developing U.S. offshore oil and gas resources. The Interior Department has pursued an aggressive Outer Continental Shelf leasing schedule of five sales per year, and it has held to this schedule with a minimum of delay. Comprehensive environmental analysis and full consultation with the affected States have been basic to the success of this effort.

Passage of amendments to the Outer Continental Shelf Lands Act last year provides the tools to pursue an even more ambitious offshore effort. The Administration's new leasing schedule will offer more acreage for lease than in any other period in history. During 1976, 1977 and 1978, we offered 7.8 million acres. 14.5 million acres are proposed for 1979, 1980, and 1981. Final decisions on the pace of leasing will be made after statutory review and comment. The President is directing the Secretary of the Interior to propose additional acreage to that in the new leasing schedule.

Ms. Ross. As you know, we are required by section 18(c)(3) of the OCS Lands Act, as amended, to submit a proposed leasing program to the Congress, the Attorney General and the Governors of the affected States by June 18 of this year. Before we submit the proposed program next month, we will have completed a review responding to the directive we have received. Our review effort will concern potential sales off the lower 48 States and areas offshore Alaska.

Secretary Andrus will be faced with an important balancing test when he makes his decision. Section 18 requires that, among other things, he provide for an equitable sharing of developmental benefits and environmental risks and consider the relative environmental sensitivity and marine productivity of the different OCS areas. With the strong environmental safeguards provided in the amendments, we are optimistic that a sale proposal can be designed

which would not preclude continuing multiple use of the areas' resources.

In summary, we are working to find ways to meet President Carter's directive in the context of section 18 of the OCS Lands Act, as amended. You will be provided with the results of this effort on or before June 18 of this year. We welcome any guidance you may wish to offer.

Before closing, I would like to bring to your attention a recent decision we have made regarding the 5-year program; that is, we will prepare an environmental impact statement to consider the effects of the program being developed under section 18. We expect that the final statement will be completed in January or February, before the Secretary makes his final decision on the 5-year program.

I would be pleased to answer any questions you might have.

The CHAIRMAN. Ms. Ross, what are the impediments to accomplishing the President's goal of increased production on Federal lands?

Ms. Ross. I think there are several that I would mention.

First of all would be an inability to find oil and gas. That is, if there turns out not to be resources there. We will all be disappointed—

The CHAIRMAN. We realize that.

But you indicated in your statement that perhaps staffing in the Department would be an impediment.

Ms. Ross. There are several others I would mention as well.

A second one is lack of access. If we could not get in areas, for example, because of litigation or if multiple use was not used—for example, an endangered species habitat or marine sanctuary. Both of these we face on lease sales on the schedule.

There are occasions of what I would call a diffusion of authority, where the Department cannot itself take an action. For example, I would point out that the Coast Guard has to agree to permits when shipping lanes are involved.

EPA has discharge permits. The Department of Energy has to approve some of our terms and conditions. States with coastal zones programs also must determine consistency of plans for production and development.

So I would cite all of those. And then on the question of planning within the Department, we have a number of milestones that have been set by statute. There are a number of activities we must carry out, and those require time and people and dollars.

I don't think that I would mention those first as impediments, because they follow directly from the OCS Lands Act amendments. I don't believe it was the committee's intention to put up impediments.

I see those as planning processes that you intended, and that we are trying to carry out expeditiously.

The CHAIRMAN. When you talk about diffusion of authority—

Ms. Ross. Diffusion of authority.

The CHAIRMAN. Would you go into that a little more?

Ms. Ross. I think there may have been a time early on when Interior was essentially the party with authority on the Outer Continental Shelf. But with the rise of other legislation, other

programmatic interests, for example coastal zone management, there are other statutory bases with other people who have some say in what happens offshore. We must coordinate with them.

That is an effort that takes compromise, and some amount of time to work out.

The CHAIRMAN. I thought we had straightened all of that out with the OCS Lands Act amendments.

Ms. Ross. I think there were probably more authorities added. We deal with the Justice Department and the Federal Trade Commission in ways we did not before.

The affected States have much more participation in the program by statute than before the statute. I think that was intended, and we are making it work. We plan to make it work.

The CHAIRMAN. They are intended to expedite, because we cut out many of the legal impediments.

Ms. Ross. We hope that is true.

The CHAIRMAN. You were in the room when we asked Mr. Loftis about the differences between resource potential and high-rated areas.

Would you account for the differences between the industry's area of resource potential that are high-rated and the differences in the Geological Survey's list of potential areas, and why there is such a difference?

Ms. Ross. I think on resource potential I would mention the distinction that the gentleman before me mentioned; that is, resource potential has an economic concept to it as well—about being available in some near term; and there may be differences on that score.

There may be information differences. That is, the Survey has whatever information that other parties have, and it has more than any other single party, because it has all information that anyone has plus its own.

There may be other considerations.

The CHAIRMAN. Mr. Hughes.

Mr. HUGHES. Getting down to specifics, with regard to lease sale 49, that was the last sale in the mid-Atlantic region.

What was the resource potential for that particular sale, projected by Interior?

Ms. Ross. I don't know that right now. I am sure you might know it yourself. I don't have that data in front of me.

Mr. HUGHES. I don't have it offhand. Has Interior had an opportunity to go over and review that specific sale to determine why the projected resource potential for those tracts were so much higher than industry's own estimate of the resource potential as reflected in the low bids?

Ms. Ross. I know that the Survey was in the process of re-estimating values right up until sale time, because there was information coming in all the time. I am not sure that the final sales results were dramatically different from what the Survey expected.

But I could ask someone who is here from the Survey to respond further.

Mr. HUGHES. I think that would be helpful if we could get the figure of actual value estimated by Interior prior to the sale, ascertain what steps they utilized up to the time of sale to modify those

figures, and then the analysis that was made subsequent to the sale to determine why there was such a difference between the industry's estimate and Interior's estimate.

The CHAIRMAN. Would you like to have someone else respond?

Ms. ROSS. I think it would be better to provide it for the record, since I don't think anyone has it in their head. That would be possible?

Mr. HUGHES. Yes.

The CHAIRMAN. We will leave the record open for that at this point.

[The following was received for the record:]

Resource estimates for each lease sale area are made at key decision points in the sale process leading to a lease sale. As the evaluation of a sale progresses and as more information becomes available, resource estimates change up until the final evaluation prior to the sale.

During tentative tract selection for Sale No. 49, resource estimates were made for 136 tracts. These were the tracts addressed in the Environmental Impact Statement (EIS). These were conditional estimates based upon the condition that hydrocarbons are present. The conditional means of these estimates was 152 million barrels of oil and 2.53 trillion cubic feet of gas. During the evaluation process, the sale prospects were redefined by detailed mapping of each prospect using seismic data and new drill hole data. Detailed economic and engineering data were used in the final evaluation.

In November, just prior to the publication of the Proposed Notice of Sale, the Secretary, at the recommendation of the Geological Survey (GS), deleted 27 tracts due to geohazards. At the time of the sale in February GS estimates for the 109 tracts offered were 4.1 million barrels of oil and 0.45 trillion cubic feet of gas. Therefore, GS's final risked resources estimates indicate that at sale time GS, like industry, did not think very highly of the Sale No. 49 area. This is further indicated by the fact that the GS value for the 109 tracts was \$71,669,652 and industry's high bids for 44 tracts totalled \$41,720,618.

Mr. HUGHES. Thank you.

The CHAIRMAN. Mr. Forsythe?

Mr. FORSYTHE. You have mentioned the impact of coastal zone management, and I suspect you heard Mr. Loftus refer to that problem and the Justice Department opinion that the Coastal Zone Management Act is not only limited to exploration but also to nomination of selected tract-lease sales, and perhaps other prelease OCS action by the Department of the Interior.

Does the Department support the view of this Justice Department opinion?

Ms. ROSS. We have asked the Justice Department for an advisory opinion, because we could not reach agreement with the Department of Commerce on exactly how these provisions were to be interpreted I think that we do understand and accept the opinion that Justice has provided that says that prelease activities, to the extent they directly affect the coastal zone, must meet the requirements of section C(1), which is that the Federal agency must determine that to the maximum extent practicable, that activity is consistent with the State plan.

Mr. FORSYTHE. Is that going to impede the process of lease sales?

Ms. ROSS. We are looking very carefully at the opinion. It is complicated because in that same opinion Justice appears to have invalidated coastal zone regulations on an important point; that is, the question of directly affected. That is a key to the determination we have to make.

We are in the process of trying to see now what effect this opinion does have on our operation, and we will be doing every-

thing we can to make sure that it does not set back the timing of activities, if we can possibly avoid that.

Mr. FORSYTHE. I think that is a fond hope, and it is one thing I fully agree with you on, that all this is very complex and seems to grow more so.

You commented in your statement, again, the request of the President. And you have commented on the need for perhaps additional staff

Do I understand that actually an increase in BLM appropriations for fiscal year 1979 have been forwarded at some \$8.5 million? Will this increase the studies that are going to help move into an expanded lease program? Is that the purpose of this request?

Ms. Ross. I would like Don Truesdell to answer that from the Bureau of Land Management.

Mr. TRUESDELL. We had a supplemental appropriation of \$16 million, or \$15.9, and 22 additional people, principally for environmental studies.

Mr. FORSYTHE. Environmental studies?

Mr. TRUESDELL. On the Outer Continental Shelf. To assist us to gather additional information that could help us make better decisions, less conservative decisions, in the early 1980's leasing schedule.

Mr. FORSYTHE. Does that really go to the last full paragraph of Ms. Ross' statement about the environmental impact study necessary for the 5-year program?

Mr. TRUESDELL. No, that is not relating to that at all. That relates to an environmental impact statement that is being prepared on the proposed new 5-year leasing schedule.

Mr. FORSYTHE. I am very confused about the date you referred to in that paragraph. That paragraph, and the preceding one in which you state the 5-year plan would be presented before June 18, 1979, and then you say the final statement will be completed in January or February.

That would have to be 1980?

Ms. Ross. Yes.

Mr. FORSYTHE. Therefore, the 5-year plan cannot be implemented until post-1980?

Ms. Ross. We are meshing the schedule that has been set up under the OCS Lands Act amendments, with the requirements of NEPA so that we will have in June the proposal that the amendments envisaged.

It will be available for the Congress and others to comment on. We will consider those comments, and at the same time be preparing an environmental impact statement so that by the time a proposal is sent in November, also something envisioned by the statute, and comments are received on that, again from the Congress, from affected States, and from the interested public, before the Secretary makes his final decision to approve a program, an environmental impact statement will have been completed and filed in final form and will be available for people who want to comment on the program before a final decision. The major Federal action, if that were in fact a major Federal action, to take place would be the final approval by the Secretary, which I would estimate would be in February or March of that year, March being the

time when the program would be anticipated to go into effect under the program.

Mr. FORSYTHE. When would the first lease-sale be available, in 1980?

Ms. ROSS. At the moment, the March 9 draft calls for the first sale to be held in September.

Mr. FORSYTHE. September of 1980?

Ms. ROSS. That is correct.

Mr. FORSYTHE. And four sales from that point until the end of the calendar year 1980?

Ms. ROSS. Yes.

Mr. FORSYTHE. What is going on in the other 8 months of that year?

Ms. ROSS. We have, in order to meet legislation and policy changes from the time of the August 1977 program, had to include more time in the sales planning process. The sales that we will be having in 1980 under any schedule are essentially the sales that are being planned for now because of the long leadtime.

Let me give you an example of the times we have to factor in. In our previous August 1977 schedule, the proposed notice of sale and the final notice of sale were 2 months apart. During that time, under what we now have as a statute for the program, we have to fit in 60 days of a comment period, enough time for us to receive those and prepare written comment on them and give 30 days to DOE to review certain lease terms and conditions.

We had to advance the time and you will see that on the March 9 proposed schedule, 2 months in order to in fact be able to allow 60 days for the Governors. We have been asking them to take a shorter time in the interest of keeping the schedule and they have been cooperating.

Mr. FORSYTHE. How many sales between January and September 1980?

Ms. ROSS. Between January and September?

Mr. FORSYTHE. On the sales you are proposing?

Ms. ROSS. None on the schedule proposed.

Mr. FORSYTHE. And in a sense, here again, through this act, we have perhaps lost a year just in getting geared up to go under the new act.

Ms. ROSS. I don't know that I would attribute it all to this statute. For example, we have had a situation where the geohazard analysis has not been available at the same time that the environmental information and the environmental statement have been available. That hit us late in the game in sale 49.

We are trying to work in a way that would allow that information to be factored in and be a part of the environmental statement.

So there are other points where a week or month has come in.

Mr. FORSYTHE. I may have been unfair in laying it all on the OCS amendment. There have been enough other things that have impeded us.

The CHAIRMAN. Mr. Livingston?

Mr. LIVINGSTON. Ms. ROSS, obviously you have a great grasp of this problem and I am curious if you could tell me exactly what is the best step this committee could take in order to provide the

incentive to increase exploration and production of energy on the OCS?

Ms. Ross. I think that perhaps we try to let this legislation work and see how far we get. That is, I am not here today suggesting that there are legislative changes that this committee would consider. Were there some, I would bring them to your attention. But my feeling is we have had a radical change, especially in procedure, a radical change from the 1953 statute.

We are working overtime to try to keep the schedule going, get a new schedule in place, get the regulations in place and phase it all in. We may come back to you for some help, but right now I think we are trying to make it work.

Mr. LIVINGSTON. How much time are we talking about?

Ms. Ross. In order to get the feeling for how it is working? I would say that we certainly expect to get most of our regulations in place by the summer. That is important, to get some experience under the regulations.

The 5-year program goes into effect in March 1980. We would like to see whether we could go through this process—very elaborate, three times to the Governors, twice to the Congress, once to the President—to schedule a sale we used to be able just to schedule.

So we would like to run that once. I would say through spring of next year we would still be gathering information. That does not mean we are on slack to spring of next year.

All of our regulations have gone out to hearing. We will have a hearing tomorrow. There are a lot of opportunities for people to talk to us.

But with respect to what the committee might do, my thought would be that we play that out.

Mr. LIVINGSTON. How many lease sales do you perceive to be let out between now and spring of next year?

Ms. Ross. Our next sale is an important one to us. It is sale 48 in southern California. That is scheduled for June of this year.

Then we have a Gulf of Mexico sale, sale 58, and another Gulf of Mexico sale, sale 58A, and then perhaps the most challenging and critical, the Beaufort Sea joint sale with the State of Alaska which is scheduled for December of this year.

So we will be very busy in the interim.

Mr. LIVINGSTON. Thank you, Mr. Chairman.

The CHAIRMAN. Mr. Lewis?

Mr. LEWIS. In attempting to get a handle on your past schedule and relate back to where the President, at least in his comments which, would appear to be taking us, I am very serious about getting an understanding of where you have been in terms of lease schedule arrangements.

As I understand it, in the schedule you proposed on March 9, which would be authorized under Public Law 95-372, was supposed to be an accelerated schedule. But it is also my understanding that there are four sales a year for the first 2 years which was a decrease from the optimum of five sales per year which was the status quo.

I am curious to know, following the President's comment, on what additional information you will base any new decisions or

patterns and if that information is really any different from that which was available a few short months ago.

Ms. Ross. I think you may have noticed in the President's fact sheet that supported this message, he pointed out that in fact the leasing schedule will offer more than any other period in history, and then he cites some statistics comparing the 1976 to 1978 period with 7.8 million acres to the 1979, 1980, 1981 period, which is 14.5 million acres.

So there was already some acceleration built into the schedule of March 9. That is, some more acreage being offered on average over that time period.

His direction to us now is to do more and that is the phase we are in presently in the Department, doing the staff work to determine how much more we can do.

Mr. LEWIS. There is an impression out there that probably is mistaken that the Department of Interior would really prefer that all of this business of leasing land and allowing people to fool around with resources really ought to go away.

There is some indication, at least from those who talk about these things, that Interior really is ready to stand in the way of progress in this area despite what the President might say.

Could you give me an idea, when you first established your leasing schedule, what was the basis for determining the number and location of sale and specifically what were Interior's goals? Do you have a specific goal?

Ms. Ross. First, I think I would say that I don't believe that is the way I would see the Department of Interior's stand on leasing. We have this August 1977 schedule that is almost unique in Government in that it sets a number of things month by month that will happen to make acreage available and it actually happens.

So I think we are committed in this offshore program to this kind of schedule, and we want to extend that. Many of you have seen the package of work that was done in the Department to support the March 9 proposal. It is quite a thick document of staff work.

There were two proposals in there. One was identified as the maximum administratively achievable. It had an average of six sales a year on it. That was what we could determine from querying the Geological Survey and the Bureau of Land Management, the maximum workload that they could carry out with the resources that they had.

Then there was another schedule which had four sales a year on an average which was more cautious—get more environmental data, consult more extensively with people—conservative approach.

Those two were presented to the Secretary with lengthy discussion about the merits of each and a decision. He made a decision that was in the middle of that range, which he described as his best judgment balancing all of the factors that the OCS amendments called for in section 18 that directed him to set up a program.

He has also directed us to go back to the drawing board, as he puts it, looking again at relaxing several things, one, the resource constraints—the assumption that we made about using only resources that we had—and then asking us specifically to look at the

high potential frontier areas and see if we could not do a little more, which is now where we are.

Mr. LEWIS. Is it your personal belief that DOI has the kind of staff capacity, the expertise and otherwise, to evaluate that new pattern of things, that is, to decide which areas of high priority are for production? Is that not a new slant for the Department?

Ms. Ross. No, I don't think so. We certainly ask everybody we can for their advice. The information that the chairman was referring to is a document we put together based on industry's response and information from the Survey so that, yes, I think we have the expertise to put together the program. We rely on a lot of people outside of the Department in a lot of settings before we proceed.

Mr. LIVINGSTON. Just following up, I understand that records over the past 10 years have shown that actually the larger the acreage offered—the larger the sale the least acreage over a progressive period.

Ms. Ross. Proportionately.

Mr. LIVINGSTON. Would it not be better to offer fewer sales and larger acreage so a driller has more latitude over the longer period of time?

Ms. Ross. I think that we are principally trying to get the kind of mix Mr. Loftis was talking about, that is, to make available acreage across the wide range of potential resources so that the sale size that we are looking at is—I would say the constraint is more of an administrative constraint about how much we can put together and write a single environmental statement on and work with affected local and State officials.

If I understand what the intent was in putting those figures together, it was to suggest that we have a number of smaller sales, not larger sales.

Mr. LIVINGSTON. We want smaller sales with wide area for production. Is that not right?

Ms. Ross. I think that is in fact—

Mr. LIVINGSTON. Is that where we are heading?

Ms. Ross. The gentleman here before cited all of the huge sales in the Gulf of Mexico. That is where your numbers came from.

We had a sale of 2.3 million acres—we had some huge sales in the Gulf of Mexico in the 1974-75 era. We are not repeating those. So I think that the experience that you see in those statistics is something we have already taken into account.

Mr. LEWIS. One more question, if I might.

It is really by way of comment. I am relatively new around here, but I have seen legislative bodies move very quickly, usually in reaction to crises.

I am concerned about where DOE moved in the past versus where the folks may be taking us, where I have some of the concerns that you have expressed about environmental balance and the like. But if this acceleration does not move us much beyond where it is in California, I can see the people causing this House to take it all away from you.

There is a value for you to accelerate this process given the President's direction as well as to what the people are telling us out there. Otherwise, we will end up going to the other extreme,

that is, dig a hole and jam it into the ground and take it out almost regardless.

I am wondering if your people have a sense of what is out there, how the people are reacting?

Ms. ROSS. We do extensive consultation. We are always open. We have a National Advisory Board that meets quarterly that has all of the affected States and industry represented.

We have a tremendous outreach program. Everything is done in a fishbowl. But if there is more that we can do, things where we have overlooked—

Mr. LEWIS. I drove into a gasoline station yesterday and there was no line at all while people were parking their cars and locking them overnight in California.

Ms. ROSS. If California would like offshore oil, we will have a lease sale there later this year.

Mr. LEWIS. Thank you.

The CHAIRMAN. Mr. O'Brien.

Mr. O'BRIEN. At the time of our last set of hearings, we had testimony from the Department of Energy to the effect that they had recommended seven lease sales per year and right after our hearing, the Secretary came out with five.

Could you respond to us why Secretary Andrus appears to have disregarded the recommendation of the Department of Energy in that respect?

Ms. ROSS. I don't think that he disregarded the recommendation. There are a number of things I could say about the process.

As to what the memorandum of understanding that we have with them calls for—

Mr. O'BRIEN. You have told us there was an array of options before which ran the gamut from four to seven—

Ms. ROSS. I said four to six.

Let's take the one that had six, which is what we thought was flat out what we could do administratively. That schedule had two sales a year in the Gulf of Mexico of up to a million acres each. DOE had three sales in the area of 600,000 acres each. I don't call that a significant difference.

So I think that we were not widely apart from them in the kind of staff work that was put together. We have to discuss with them, and we are as part of the memorandum of understanding, the technical base for their projections and the exact acreage of sales, the technical matters that go into the projections that they are doing.

But in terms of broad philosophy, they advised us that we ought to be moving as quickly as we could and that was part of the staff work that was done. I think the Secretary had a difficult decision. He had to balance the energy needs as indicated in the production goals with certain other concerns. He took it upon himself and he did it. He now has had discussions with the President and has been given some new instructions about the next phase of that schedule and he is pursuing them with a lot of energy.

He has put on the—

Mr. O'BRIEN. Let me stick with the comparison of the DOE and the DOI proposals. What were the respective acreage figures?

You cited the President's fact sheet which spoke of 14 million acres which will be perspectivevely available versus the 7 million available in the last 3 or 4 years.

Ms. Ross. I don't have that number. I could add that up and provide that to you.

Mr. O'BRIEN. Thank you.

Was the Department consulted prior to the President's April 5 speech in assisting his office in formulating the speech?

Ms. Ross. I believe it was.

Mr. O'BRIEN. What was the nature of—

Ms. Ross. I was not in that particular channel. I suspect that the Secretary explained to him the considerations behind his proposal. But I was not a party to that.

Mr. O'BRIEN. Who was? Was the Secretary?

Ms. Ross. Yes, he was.

Mr. O'BRIEN. Would the Secretary's proposal for the 5-year plan be different had it been published after the April 5 message?

Ms. Ross. It would seem so.

Mr. O'BRIEN. It would have been more inclined to approach the DOE recommendation?

Ms. Ross. The reason I hesitated when I was responding is that the benchmark for the April 5 statement was the earlier statement. If there had been no earlier statement, what would the Secretary's position or the President's position have been?

I think it would have been we want to have an active program and that the Secretary would have been responsive to that.

Mr. O'BRIEN. I guess what I am trying to get at is the relative weight of the President's statement in this. It would seem, at least the trade press has indicated, their assessment is that the President's statement is some sort of landmark change here, that we are going to have a change of approach after the April 5 speech with respect to OCS development.

I think one of the things that occurs in the minds of the members of the committee is whether or not we have seen a change as of April 5, or whether or not we are proceeding with business as usual. I gather from your testimony that we have seen a significant change. Is that correct? Is that a correct conclusion?

Ms. Ross. I think it is always important when the President of the country speaks on an issue. The OCS amendment envisioned, in fact, that this proposal would go to the President—later on, but it would go to him—and he has now provided his advice somewhat earlier. I don't think that is a radical departure in terms of how things are being handled. But I think it is important information that we will take very seriously.

Mr. O'BRIEN. The energy security fund which will be created by the revenues from the windfall profits tax, would that energy security fund in any way influence or be put to the use of OCS or related agencies in the administration?

Ms. Ross. I don't know if that would be the case or not, but I expect that the DOE witness who will be coming up may be able to respond to that.

Mr. O'BRIEN. In a recent letter to the Secretary, API suggested that the call for nomination to sale be shortened considerably and that 18 months or less should be the target.

Would you comment on that recommendation?

Ms. Ross. I was just looking for a set of things that go on now between the call for nomination and the sale date. There are quite a number of things that we undertake, both as standard practice for preparation of the environmental statement and as required by the OCS amendments—the proposed notice to the Governors, for example. We have tried to mesh those as much as we can and we have tried to make each of the steps as streamlined as possible.

If there are ways where we can cut down on the timing, we are certainly interested in them.

I mentioned to Mr. Forsythe—I mentioned two of the several things that have increased that time recently, the 60-day comment period and the DOE statute and also our effort to integrate the geohazard analysis. If there are ways to do those things in a less time-consuming way, we are open to suggestions on that. I would think that that would be something very pertinent for the commentators on the 5-year program because they are now generic to certain types of sale areas.

We are regularizing somewhat and you will see that in the backup information. For the Gulf of Mexico, for successive sales outside of the gulf, and for frontier, first-ever sales there are different amounts of time. So if we could cut down, we would welcome that.

Mr. O'BRIEN. We had testimony about the environmental statement. I presume your authority is a determination pursuant to 102 of NEPA, that a 5-year plan is a significant Federal action. Is that correct?

Ms. Ross. Not exactly.

Mr. O'BRIEN. What is the authority for that 5-year plan, environmental impact statement?

Ms. Ross. We will be writing the impact section under NEPA, under 102. The reason I said not exactly is that in the course of sending out the March 9 proposal for comment, we got a lot of comment back telling us that although we had never written an environmental impact statement on a schedule, that they thought we ought to publish one on this schedule. And in fact the Justice Department similarly advised us and in that situation it seemed prudent to us, since it would not, in the time frame we have before us, delay the timing of sales, that it would be prudent to go ahead and write that statement, although it is a major investment of resources for us.

I think Mr. Loftis made mention of that in his testimony—that environmental statement are often court bait. Failing to have one, I think we have come to believe in this situation, it is a very inviting target.

So we will write a statement and we will do as good a job as possible in complying with NEPA and having the information in that format made available to people so they will understand what we know to be the environmental impact of the new program.

Mr. O'BRIEN. Will that cause any kind of delay in the implementation of the 5-year plan?

Ms. Ross. Not in the schedule that I mentioned to you administratively. If it were the subject of litigation, that would be a different matter. But we are writing it precisely to get over that hurdle.

The CHAIRMAN. We have a vote on the Jones of Oklahoma amendment to the budget resolution.

We will be right back.

[A brief recess was taken.]

The CHAIRMAN. The committee will come to order.

Mr. O'Brien?

Mr. O'BRIEN. Thank you, Mr. Chairman.

In our March hearings, Continental Oil Co. stated:

Since 1970, the cumulative action of OCS regulation has caused approximately a 1-year delay in the preparation for the sale and an additional 1-year delay in exploration and development activities following the sale. The effect of the amendment to the OCS Land Act will be to additionally delay to what is already a deteriorating situation.

What would the response be to that charge?

Ms. Ross. Well, I think it is true that a lot has changed since 1970. I think we covered a lot of that here in the testimony already, again not just the advent of the OCS amendments but a number of other statutory changes, coastal zone, DOE organization.

There are a number of things that take more time to accomplish. I don't know if that makes OCS different from other activities in modern times. But it is true that we are doing more in the way of planning and in the way of general preparation and activities connected with the OCS program and the OCS amendments are part of that trend.

I think there are some things in the statute that set some firm times, for example, there is a requirement that exploration plans be handled by the Department of Interior in 30 days and we are meeting that. A number of people have suggested that perhaps that is too tight. So there are some things in the amendment that occur to me that do set some pretty tight time frames that we have to move swiftly to get through. But by and large, most of the times that have been allowed are for more people to participate more extensively.

Mr. O'BRIEN. Thank you.

The CHAIRMAN. Mr. Kitsos?

Mr. KITSOS. Are there not some prelease activities still to occur in the future—between now and lease sale 48 in California with tract selection being the major activity?

Ms. Ross. Lease sale 48?

Mr. KITSOS. Lease sale 48.

Ms. Ross. We have proposed a notice of sale to the Governor and his comments are due, so that the only thing remaining is for the Secretary to make a final sale decision and publish it.

Mr. KITSOS. To what extent is the Justice Department advisory opinion having an effect on how you deal with the State of California in terms of deciding whether this directly affects the coastal zone?

Have you made a decision on whether the sale directly affects the California coastal zone?

Ms. Ross. We are working on it. We will have to do something very quickly because of the timing of California. But we don't have a conclusion right now to report on exactly how we will comply with that opinion.

Mr. KITSOS. But it is your understanding that this is a Department of the Interior decision to make and not a State of California or a Commerce Department decision?

Ms. Ross. I think we might expect the Commerce Department to speak to that at some point.

Mr. KITSOS. But ultimately, is it your department's decision?

Ms. Ross. Well, they will set out something in some regulation—they tried to already and they may have to revise that now. I would expect that they would try to interpret further what directly affect means and that we would work with them and provide comments as we have in the past and then that would have some control. It would be binding in some way on what it meant to directly affect.

But then, yes, we would have to work within that.

Mr. KITSOS. Thank you.

The CHAIRMAN. Mr. Forsythe?

Mr. FORSYTHE. Thank you, Mr. Chairman.

The last time you were here, we were talking about due diligence. We are still talking about due diligence. In conversations with the private sector, we understand that your leases are talking about filing an exploration plan within 2 years within the awarding of the lease. Is this correct?

Ms. Ross. We have a proposal out at the moment for comment that contains that provision.

Mr. FORSYTHE. This would be added to the lease. Do you define that as due diligence, a due diligence requirement?

Ms. Ross. I think that it is more in the manner of a method for the Geological Survey, which administers the leases, to understand what the timing is of likely activity on that leasehold and to make appropriate planning arrangements of its own in order to accommodate those plans when they come—

Mr. FORSYTHE. To accommodate?

Ms. Ross. To expect the timing of the activity.

Mr. FORSYTHE. Where is the authority for that type of proposal?

Ms. Ross. I think that we have asked lessees to provide us information on a number of subjects and on the basis of quite general authorities to have people provide us information to carry out our responsibility.

Mr. FORSYTHE. As I understand a development plan, that is more than just an initial document. It is a detailed plan. I am using the wrong term, exploration plan, not development plan, and with a sale that might mean a lessee is involved in a considerable number of tracts and probably is progressively looking forward to that 5-year lease to do it.

This would mandate that you act on that first one within 2 years.

Ms. Ross. I would like to ask Tom McCloskey who has been directly responsible for some parts of this regulation to try to answer your question.

Mr. McCLOSKEY. Congressman Forsythe, just let me go back for a second to some earlier questions to be sure the record is correct.

The regulations that you are referring to went out in proposed form on January 19 and the comment period on those regulations closed on March 16. So it is correct—they are no longer out for

public comment and we are presently working on those regulations trying to put them into final form.

The second question you asked is: What authority did we draw upon for the promulgation of that provision in the regulations? We tied the authority to section 5(a)(7) of the act, of the amendment which calls for us to promulgate regulations for the prompt and efficient exploration and development of leases.

The third question that you have asked has to do with what the impact would be on the filing of exploration plans. Many of the commentators on the proposed regulation have pointed out the problems that are associated with the 2-year time frame for the submission of exploration plans. All I can say to you right now, Congressmen, is that we have all of these comments and are analyzing them.

It is important however to draw a distinction between the filing of a plan and the actual conduct of activities on a leasehold under an approved exploration plan.

We have numerous industry comments on that provision. There is a very, very intense dialog going on within the Department of Interior over the wisdom of maintaining that provision in the regulations and the outcome on that I think is probably something that will go all the way to the Secretary for a final decision.

The only thing I can say conclusively is that we are hoping to—I cannot say conclusively and hopefully in the same breath. But we are aiming for a publication of final regulation on 250.34, the exploration plan regulation, in June and the outcome of that dialog would be reflected in the provisions of those regulations.

Mr. FORSYTHE. Is there a penalty provided on that regulation?

Mr. McCLOSKEY. There is not a specific penalty associated with the failure to submit a plan within 2 years. However, the OCS Land Act Amendment and its 250 regulations do have penalty provisions for the failure to comply with the provisions of the act or the provisions of the regulations.

So it would be my assumption, although I am not a lawyer and I cannot anticipate what the Solicitor's office may have to say on that specific question; my assumption is that the penalty provisions would apply there, too. The submission of a plan would be a requirement of the regulations, and failure to act within that time frame would be subject to the penalties.

Mr. FORSYTHE. Could subject the lessee to cancellation of the lease?

Mr. McCLOSKEY. Once again, I would want to defer that to an attorney. I am not an attorney. I really don't know whether that alone would lead to the cancellation of a lease.

Mr. FORSYTHE. The Department does not consider this as part of the due diligence program in which DOE and DOI have a joint responsibility?

Mr. McCLOSKEY. As I said earlier, we tied that provision to section 5(a)(7) of the act. I suggest to you that perhaps we are splitting hairs when we talk about prompt and efficient development of a lease and due diligence.

But we felt we had to have a provision to implement provision 5(a)(7) and that was it.

Mr. FORSYTHE. As I understand the statute there is no time period in terms of cancellation within the 5-year plan and it looks to me like you are going in that direction, or at least trying to, to narrow the lease down so that something substantive has to be done in the 2-year period.

Mr. McCLOSKEY. All we are requiring under the proposed regulation, and I cannot anticipate the outcome of the internal dialog, but under the proposed regulation we would be requiring the filing of a plan which would not have any bearing on the 5-year primary term. It would just be a period of time in which we would expect them to file a plan and then I would refer back to Heather Ross' comments about the reason for wanting a plan within that time frame.

Mr. FORSYTHE. The plan will be, I expect, to do something 4 years and 6 months into the lease?

Mr. McCLOSKEY. It could very well be. I suspect that we will have a full range in terms of types of plan activities that would be covered in those plans.

Mr. FORSYTHE. I think there is concern in this area. I appreciate your comments.

Mr. McCLOSKEY. I can assure you that there is concern and, as I said, we are having an internal discussion.

Mr. FORSYTHE. I suspect it will continue down to the filing wire. Thank you for your comments on that one.

Ms. Ross, on this programmatic environmental impact studies, and it has been discussed here a little bit, I have gotten some information that your legal counsel advised that the Department not proceed with the programmatic environmental impact studies. Is that correct?

Ms. Ross. At an earlier time when we first put out regulations governing the processes of section 18, last October, we discussed with our Solicitor's office whether or not provision would be made for the writing of an environmental impact studies and it did not seem at that time that we ought to make such a provision.

Following that, we did prepare a proposal, the Secretary made a decision, it was sent out for comment. We got extensive comments, although most of them informal, that an environmental impact statement seemed to be necessary and I did mention the Justice Department. I think that probably was a key piece of advice to us.

Mr. FORSYTHE. They changed their mind?

Ms. Ross. I don't know whether Justice had ever looked at it before. As of March, they felt that we should do that.

So in light of that advice, we have agreed to do so.

Mr. FORSYTHE. That is in place. Has it been challenged?

Ms. Ross. Has the fact that we are—

Mr. FORSYTHE. The concept that you are doing an environmental impact statement?

Ms. Ross. I don't know how it would be challenged. We have had people tell us as perhaps you are that it might not be something that they would hope we would do.

Mr. FORSYTHE. You get letters, I am sure.

Ms. Ross. It is something on which we have had dissent.

Mr. FORSYTHE. Again, we have already discussed this, the impact on the time frame. Of course, you can respond to that.

Back to the lease schedule. We have heard from industry, and you have heard it here, that they have the capability of meeting seven sales a year.

Do you have information to the contrary and can you spell that out for us a little bit, why you apparently think that a seven-sales-per-year plan is more than the capability of the industry?

Ms. Ross. I don't know anyone in the Department who believes that that is beyond the capability of industry.

Mr. FORSYTHE. But you think that it is still an unwise idea, to proceed with a seven-sale-per-year plan?

At least your plans have indicated that six is flat out, I think is the term you used.

Ms. Ross. That was the maximum of our administrative capability with the resources we had. That was not the maximum of industry.

Mr. FORSYTHE. That is the maximum of your agency's ability to manage that many sales?

Ms. Ross. To prepare for that.

Mr. FORSYTHE. To do more would mean an expansion of the agency just to handle the agency's responsibilities?

Ms. Ross. That is correct.

Mr. FORSYTHE. So it is not really in reference to the industry's capability. It is in reference to the agency's ability?

Ms. Ross. Correct.

Mr. FORSYTHE. Thank you.

The CHAIRMAN. Mr. Hughes?

Mr. HUGHES. Thank you, Mr. Chairman.

I would like to take you back, if I might, to the due diligence colloquy you had with Congressman Forsythe.

I presume that we already have language in existing leases that require an oil company in terms of a lease to more expeditiously explore for oil and gas?

Ms. Ross. I think that the Bureau of Land Management who write these lease forms can respond to that.

Mr. TRUESDELL. Yes, there is a clause——

Mr. HUGHES. What does that clause actually say? Do you have a specific language?

Mr. TRUESDELL. I have a lease form with me.

It is section 10 of the lease form. It reads:

Lessee shall comply with all regulations and others relating to the exploration, development. After due notice in writing, the lessee shall drill wells and produce at such a rate that the lessor, the United States, may require in order that the lease area or any part thereof may be properly and timing developed and developed in accordance with sound operating principles.

Mr. HUGHES. So actually what the proposed rule would do would be to put in place a standard without the necessity of a formal notice to an operator or lessee that is not moving expeditiously in the judgment of Interior?

Mr. TRUESDELL. Yes.

Mr. HUGHES. That would try to prevent those lessees from exhausting the entire time of the lease doing nothing.

For instance, I believe that just recently, was it not Chevron in the Santa Barbara Channel, that went the entire primary term, then agreed that they would have a rig in the Santa Barbara

Channel this past February and then failed to comply with that commitment. It is addressed to that particular problem?

Mr. TRUESDELL. It would address itself to that problem. This term has been in the lease for 15 years probably.

Mr. HUGHES. But what you are trying to do is you are trying to develop a standard for all lessees require that they show some indicia of due diligence in a certain period of time, 2 years in this instance?

Mr. TRUESDELL. That is the basis for the regulations that we have published which are also required by the new OCS Land Act amendments.

Mr. HUGHES. Apparently the industry has given Interior some indications that that is particularly repressive?

Mr. TRUESDELL. I have to pass on that.

Mr. McCLOSKEY. I think that is the general drift. I would characterize the industry's comments as being uniformly opposed to that provision.

Mr. HUGHES. I must assume that all bidders on tracts know that within a certain period of time they are going to have to do something in order to determine whether hydrocarbons exist on that tract.

Do they oppose any uniform requirement that they show that they are moving ahead expeditiously, or is it directed to the 2-year time limit, and a feeling that 5 years is required?

What seems to be the thrust of the opposition to that?

Mr. McCLOSKEY. You are asking me to characterize industry's opinion—perhaps the first witness would be better able to answer your question than I.

If I could, in a simplified fashion, characterize the industry's comments, they feel that the 5-year primary term is enough incentive for exploration of a lease. That, coupled with the cost of royalty payments and all of the other things that are in existing programs.

I think you have to be aware of the fact that all we are going to ask them to do under the proposed regulation, and this may change in the final regulation, is to submit a plan. The plan itself does not guarantee that they will have any activity on any leasehold. It merely lays out a proposed sequence of events and describes types of activities. My suspicion is that in many instances that is all we would have in the primary term. I don't think we will change the economics of exploration, except in terms of adding cost and in terms of submitting a plan by requiring a plan submittal within 2 years.

Other factors will still determine whether or not they will go ahead with drilling.

Mr. HUGHES. It seems to me during the debate on the due diligence provisions of the lease in committee, both in the 94th and 95th Congresses, this was one of the issues that was discussed. I think very actively and at least this Member and some others came to feel it was important to have certain benchmarks which we could use to measure whether or not a company is moving ahead expeditiously.

Let me ask some questions on prelease, onstructure drilling. What is the present status of that proposed rule?

Ms. Ross. That has been published in the Federal Register for comment and there will be public hearings on provisions of the regulation tomorrow.

Mr. HUGHES. How many days of hearings?

Ms. Ross. I think there is 1 day.

Mr. HUGHES. Thank you.

Ms. Ross. One day here in Washington.

Mr. McCLOSKEY. There is just 1 day in Washington and the comment period on the regulations in general, the 251 regulations, will close on May 18, 1979.

Mr. HUGHES. Thank you.

The CHAIRMAN. Mr. Livingston?

Mr. LIVINGSTON. Following up some discussion we had earlier, Ms. Ross, could you tell me with respect to the size of the acreage set-aside what are the other differences between the DOE and DOI lease sales in the Gulf of Mexico?

Are there any differences other than size or acreage in sales?

Ms. Ross. I doubt it. I cannot speak in detail for the DOE proposal, but I would suspect that like us they are anticipating that the tracts would be broadly scattered across the Gulf of Mexico.

Mr. LIVINGSTON. The tracts would be broadly scattered. But there are no specific differences in terms of tracts or an approach to the sales?

Ms. Ross. You are speaking just in the Gulf of Mexico now?

Mr. LIVINGSTON. Principally in the gulf. Could you answer my questions with respect to the gulf and then—

Ms. Ross. I am not aware of any difference other than the one I mentioned—our guidelines had been up to 1 million acres per sale and two sales a year. They had an assumption of 600,000 acres per sale.

Mr. LIVINGSTON. The DOE had how many?

Ms. Ross. 600,000 acres.

Mr. LIVINGSTON. Smaller sizes but that is the only difference that you know of?

Ms. Ross. Yes.

Mr. LIVINGSTON. What about in other areas, other than the gulf?

Ms. Ross. I think there are again acreage differences that we are discussing with them—that is, the assumption that they have made for their modeling as to the size of the sale. Theirs tends to be larger than ours in other areas.

Mr. LIVINGSTON. Differences other than size?

Ms. Ross. I think remembering the printout I saw, they labeled some areas differently than we did.

Mr. LIVINGSTON. How so?

Ms. Ross. They had something called Bodega which we called central and north California. It is a smaller cut they have added. They believe in cutting on leases in 100,000-acre blocks.

Mr. LIVINGSTON. In the Secretary of Interior's letter that is attached to the statement that you provided us with, he uses the word "quality" which refers to areas offered for lease.

What does he mean by that word? Could you amplify?

Ms. Ross. I think quality is prospectiveness in terms of resource potential.

Mr. LIVINGSTON. From the standpoint of the Department or from the standpoint of the industry?

Ms. Ross. I am not aware of anyone ever having made a distinction of that in the Department. I think that we are interested in both rankings we got from industry. They separately provided a resource potential and an interest in exploration. We are interested in both of those. The Survey material falls within the range of difference between those two columns.

Mr. LIVINGSTON. You were talking about the affect of the 5-year program and the establishment of programmatic environmental impact studies. Has it not been projected by many of your legal experts that if this environmental impact studies is undertaken and implemented that a number of lawsuits will in fact develop from that?

Ms. Ross. I don't think that the Solicitor's office believes that we will invite litigation by preparing a statement that people have suggested should be done.

Mr. LIVINGSTON. What about onstructure drilling? Could you tell us specifically what the Department hopes to accomplish by pursuing a policy of onstructure drilling as pertains to the Government's desire to receive a fair return for leasing public lands, and by providing more definitive information on potential hydrocarbons?

Ms. Ross. I think the principal objective is the providing of information prelease in order to both share the risk with bidders and to even out the information differential that may exist among different bidders. That is, in finding out what one hole tells you, that better information shifts some of the risks of not finding anything to us. It is not borne entirely—

Mr. LIVINGSTON. And that bears on the Government's fair return, does it not?

Ms. Ross. It may. For example, in economics I think one postulates something called risk aversion that tells you if someone is putting up a sizable amount of money with very high risk, they may discount that a good bit. They are averse to losing big. If that were the case and we were able to share that information, we might get more competitive bidding on two counts: Smaller companies may be able to take the risk at assumed lower levels, and those discounts might be less because the total amount that people were putting up to start was lower and therefore the risk aversion was less.

Both would tend to increase the revenue to the Federal Government.

Mr. LIVINGSTON. So you think this will tend to bring a stronger return to the Government and at the same time stimulate production.

Has the industry complained about the risk you are speaking of?

Ms. Ross. Smaller firms, yes.

Mr. LIVINGSTON. The smaller firms, the ones less able to bear the high cost?

Ms. Ross. They represented to us that high bonus bids are a large gamble.

Mr. LIVINGSTON. As a matter of fact, in the Mafla sale, I understand the Government received \$1.5 billion for that sale but no oil has been found.

Ms. Ross. So you can lose a lot.

Mr. LIVINGSTON. So it is extremely high risk business.

Ms. Ross. Let me point out, since a lot of the discussion occurred earlier on about whether this—this proposal would accelerate or delay the leasing program, its intention is not to affect the timing at all but rather to have the effect that you and I are discussing, about competition and returns to the Government.

We do have in the regulation provisions that make it clear that we want to have that information within the time frames that are set in the planning process now so we will not be delaying sales in order to await that information, nor would we be postponing sales because of information, that is, because of the outcome of any such drilling.

Mr. LIVINGSTON. Again my question is, going back to my very first question, is there incentive, is there sufficient incentive in this entire program as you have structured it for a company, particularly a smaller company to get into this business with onstructure drilling?

Ms. Ross. We do have the cost well program now which has been mentioned here and we do find smaller firms participating in that type of information gathering.

We are expecting that the restriction that we have now and allowing those holes to be drilled onstructure, if that is what the consortium wishes, will not cause reduction in participation in that program.

Mr. LIVINGSTON. The only reason anyone would drill onstructure, as I understand it, is because he has sufficient data to suspect areas of high potential. Is not what you mean when you say you want to accomplish by onstructure drilling already accomplished without going quite that far? Do you understand my question?

Ms. Ross. Possibly.

Mr. LIVINGSTON. I am not sure I do.

Ms. Ross. I am not sure what not going that far means. Is there an alternative you are asking me about? We do have the cost well program. It is available now.

Mr. LIVINGSTON. What program?

Ms. Ross. Cost well. We allow people to drill holes now, but by regulation requiring it be offstructure. We are lifting that restriction—

Mr. LIVINGSTON. Would you explain what you believe the situation would be first if, on first drilling, hydrocarbons were found and if they were not.

Ms. Ross. I expect that if hydrocarbons are not found that that will be information to us and to the bidders. They will consider that in their bidding. We will consider that in our evaluation of the leases. Everyone will proceed with better information.

I think the same is true if they find hydrocarbons. That is, there is nothing in our program or regulation that is triggered by the finding of hydrocarbons or not finding them. In fact, we had two finds of hydrocarbons inadvertently in our cost well program in the last year, and we have proceeded with the sale planning preparations.

I would expect that would be the case.

Mr. LIVINGSTON. Strictly informational?

Ms. Ross. Yes. It might happen that if someone initiated one of these wells early enough and either found or did not find something, whatever seemed to pique their interest more, they may want to go and drill another well and, subject to the information being available in time for the sale date, we would allow them to do that.

Mr. LIVINGSTON. Thank you. You have been very patient with me.

The CHAIRMAN. Thank you, Ms. Ross. We appreciate your testimony.

Next we would hear from Mr. Dobie Langenkamp, Deputy Assistant Secretary, Oil, Natural Gas, and Shale Resources.

STATEMENT OF R. DOBIE LANGENKAMP, ASSISTANT SECRETARY, OIL, NATURAL GAS AND SHALE RESOURCES, ACCOMPANIED BY ROBERT J. KALTER, DIRECTOR, LEASING PROGRAMS; AND ROBERT LAWTON, DIRECTOR, LEASING POLICY DEVELOPMENT

Mr. LANGENKAMP. In view of the lateness of the hour, I would like to submit the statement that we have to this committee for the record and briefly summarize by saying—

The CHAIRMAN. The entire statement will be printed in the record but please do not skirt it. The sunlight is still out so we consider that it is still early.

[The following was received for the record:]

STATEMENT OF R. DOBIE LANGENKAMP, DEPUTY ASSISTANT SECRETARY, RESOURCE APPLICATIONS, DEPARTMENT OF ENERGY

Mr. Chairman, I appreciate the opportunity to appear once again before this Select Committee to discuss Outer Continental Shelf (OCS) issues. We at the Department of Energy (DOE) are pleased with the efforts of the Committee to advance exploration and development of oil and gas on the OCS. The DOE is working toward these same goals and to this end, I would like to discuss some of the factors we believe will serve to improve energy development and production from the OCS in a timely and efficient manner.

Production goals update

When we testified before this Committee in March, we reviewed our draft report on OCS energy production goals which was sent to the Department of the Interior (DOI) and the Governors of all the coastal states. We have had numerous discussions with DOI on various aspects of the draft report and have received their comments. These comments, and those received from State Governors and other interested parties, will be considered in preparing final OCS production goals which we expect to announce by June 1.

On March 9, 1979, the Secretary of the Interior announced that DOI's draft proposed five-year OCS lease schedule for the period March 1980 to February 1985 had been sent to the Governors of affected coastal states for review. This announcement was followed by the President's April 5 energy message which directed the Secretary of the Interior to propose additional acreage to that contained in DOI's proposed schedule. In support of this Presidential directive, DOI has been working with DOE to develop and analyze additional lease schedules for the 1982-85 period. At DOI's request, we have compared the production potential of DOI's draft proposed schedule and more accelerated schedules to that of the DOE schedule of seven sales per year. I would like to summarize the results and implications of these comparisons.

Production goals are calculated based on a particular lease schedule, regardless of how that schedule is developed. All of DOE's schedules are determined by maximizing social value subject to several constraints, including the number of sales per year and the timing and size of lease sales. Sensitivity to these constraints has been analyzed in the process of undertaking additional analyses requested by DOI.

Specific leasing constraints utilized by DOE are: Seven sales per year; sale sizes of 600,000 acres for the Gulf of Mexico and the Pacific, 800,000 acres for the Atlantic

and 1,000,000 acres for Alaska; no more than two sales per year in each OCS region except the Gulf of Mexico for which three sales are allowed; and no more than one sale every other year in all provinces except those located in the Gulf of Mexico.

These and other constraints incorporated in the analysis of proposed production goals were determined by a careful province-by-province consideration of sixteen broad subject areas defined as having the potential to constrain OCS development. Both the severity of individual constraints and the interrelationships among constraints were considered.

The eight subject areas identified as not constraining the 1982-85 lease schedule are: Capital, manpower, fabrication facilities and oil field goods, refineries, shipping, environmental studies, biological environment, geological data.

Subject areas found to be constraints or potential constraints include: Drilling rigs, water depths, weather, geophysical hazards, transportation, physical environment, CZM and acceptable facility sites, coordination.

Based on these constraints, the schedule analyzed by DOE includes DOI's August 1977 schedule of four sales in 1980 and six in 1981 and seven sales per year schedule for 1982 through 1985. This results in a total of 38 sales, with 14 in the Gulf of Mexico, seven in the Atlantic, five in the Pacific and 12 in Alaska.

The original DOI proposal was substantially different. It contains four sales in 1980, five sales in 1981, five sales each in 1982 and 1983, six sales in 1984 and one sale in the first two months of 1985. Of the total 26 sales, nine are in the Gulf of Mexico, six in the Atlantic, four in the Pacific and seven in Alaska. Sixteen of the 26 sales are newly scheduled. A number of high potential Alaskan areas are not on the proposed schedule, although two of four backup sales are in Alaskan provinces (one in Chukchi Sea and one in St. George Basin).

DOE's proposed production goals were recalculated on the basis of a five year schedule terminating in February of 1985 (assuming two 1985 sales) to provide a comparison with DOI's new schedule. Table 1 details these estimates and the comparable results from DOI's schedule.

TABLE 1.—OCS OIL AND GAS PRODUCTION UNDER ALTERNATIVE LEASE SCHEDULES ¹

Source of production	Estimated 1977	1985		1990		1995		Cumulative	
		DOE	DOI	DOE	DOI	DOE	DOI	DOE	DOI
Oil production ²									
Scheduled 1980 to 1985	0	8	13	187	125	374	266	3,379	2,387
Existing leases	304	257	257	198	198	97	97	NA	NA
Scheduled 1979 to 1981	0	14	19	318	308	222	208	2,512	2,412
Scheduled 1982 to 1985	0	0	0	90	38	283	189	2,447	1,555
Total	304	271	276	606	544	602	494	NA	NA
Gas production ³									
Scheduled 1980 to 1985	0	69	92	469	328	470	356	5,459	4,435
Existing leases	3,737	3,543	3,543	2,364	2,364	1,186	1,186	NA	NA
Scheduled 1979 to 1981	0	126	149	471	481	258	257	3,881	4,002
Scheduled 1982 to 1985	0	0	0	347	196	424	311	4,300	3,155
Total	3,737	3,669	3,692	3,182	3,041	1,868	1,754	NA	NA

¹ New schedule assumed to terminate in February 1985.³ Production in millions of cubic feet; production from existing leases is USGS most likely estimate.² Production in millions of barrels; production from existing leases is USGS most likely estimate.

Generally, the proposed DOI schedule gives slightly more production in 1985 (due to greater emphasis on the Gulf of Mexico in 1980) and substantially less production in 1990 and 1995. Cumulatively, the DOI 1980-85 schedule provides only 71 percent of DOE's oil production goal and 81 percent of the natural gas goal. In 1985, the absolute difference between the two schedules is only five million barrels of oil and 23 million mcf of gas. For 1990 and 1995, the DOI schedule provides roughly 65 to 75 percent of the DOE goal for oil and gas.

For the critical 1982 through 1985 portion of the schedule (the time period when new sales are added to the existing schedule), the DOI proposal provides 64 percent of the cumulative expected oil production and 73 percent of the cumulative expected gas production as compared to DOE's production goals.

The most important qualitative difference between the two schedules is the potential impact that a reduced number of sales may have on diversity of exploration effort, especially in frontier areas like Alaska. More lease sales and the associated level of exploration effort provide a greater opportunity to discover hydrocarbons.

Since announcing the draft proposed lease schedule and the proposed production goals, DOI and DOE have been considering a number of additional options. These options include different sale sizes, earliest time for leasing in new and sensitive areas and accelerated lease schedules, including as many as eight or nine sales per year. The results of these evaluations will be used by DOI in responding to the recent Presidential directive to expand the amount of OCS acreage offered for lease.

Diligent development

One of the responsibilities transferred to DOE under the DOE Organization Act was to develop regulations that would establish diligence for operations conducted on the OCS as well as for other leaseable energy resources.

A workable definition of diligence must be consistent with both Congressional intent and the National Energy Plan and, at the same time, acknowledge the economic, technical, administrative and environmental considerations that affect participating parties. To gather the essential information, we have sent to the Federal Register for publication a Notice of Inquiry to solicit written comments from industry, Federal, State and local government agencies and the general public with respect to approaches that might be used to structure and enforce diligence regulations. Finally, we are interested in learning of the possible impacts—both administrative and economic—stemming from the promulgation of OCS diligence regulations. A 45-day period is to be allowed for comments on the notice.

Concurrently, the Leasing Policy Development Office will be completing an analytical study of issues relating to OCS diligence. Among the issues this study will review are hinderances to achieving timely exploration and production.

Upon completion of the comment period of the Notice and the analytical study, decisions will be made as to whether new diligence regulations are needed and, if so, what form they should take.

Presale onstructure drilling

A major concern with current OCS leasing is the high degree of uncertainty regarding the resource potential of an area prior to leasing. This situation is most pronounced in frontier areas such as Alaska where energy resource potential is high but data on the geographic distribution of resources is very limited. DOI's proposed rule to allow pre-sale on-structure drilling could reduce some of this resource uncertainty and thereby allow the Federal government to make more informed calculations of tract resource potential and fair market value. In addition, companies processing this information would submit bids that more accurately reflect the true value of individual tracts.

In areas where lease sales are not held, the proposed regulation provides for drilling test results to remain proprietary to industry participants for only five years. These provisions limit one of the potential benefits of pre-sale on-structure drilling. Specifically, if the results of pre-sale drilling were available early in the lease planning process, they could be used in developing energy production goals and five-year OCS lease schedules based on these goals. To capture this benefit of pre-lease drilling, the rule should allow a longer time period, perhaps ten years, during which time test results are not made public. In the current legal context this is the only means of providing incentives that would encourage early on-structure drilling activity.

Alternatively, a pre-sale on-structure drilling program could require that detailed drilling results be made public soon after the drilling activity is completed. Several variations on this basic theme of industry funded, on-structure drilling conducted early in the lease planning process could be developed. A major issue for this alternative would be how to devise financial incentives that allow participating companies to recover some proportion of their drilling expenses. Such incentives are

likely to be required when drilling is encouraged early in the planning process and the results are made public. However, neither of these approaches should delay scheduled lease sales since they are aimed at influencing future five-year OCS lease schedules.

This concludes my prepared statement. I will be pleased to answer any questions.

Mr. LANGENKAMP. I also have with me the Deputy Director of the Leasing Policy Development Office, Mr. Bob Lawton, as well as Dr. Robert Kalter.

I think it is apparent to everyone as each month goes by that the energy situation becomes more complex and more serious. The administration's realization of the seriousness of the situation and the importance of the OCS in resolving this serious situation was reflected by the President's speech on April 5, where he directed those responsible to come up with an accelerated leasing program. The Department of Energy is probably involved, Mr. Chairman, in putting a final touch on its production goals which will be supplied to the Department of Interior for their use in determining this accelerated leasing plan.

The production goal process which is discussed in detail in our written statement is one which, in layman's terms, is relatively simple but which in its context is somewhat more complex. Determination is made as to what is needed in terms of hydrocarbons from the OCS and then a very complex determination is made as to what is feasible.

It is no secret to this committee that the Department of Energy's production goals, which were submitted to Interior originally, calls for somewhat more sales than it set forth in their schedule.

Before we oversimplify this difference, I would like to make the statement that it is one thing to set forth goals. It is another thing to meet them. In deference to the Department of Interior, we must acknowledge the fact that it is the Department of Interior which has the administrative burden of affecting these sales.

So it is with a certain amount of humility that we talk in terms of accelerated sale schedules, 38 versus 6 sales or 7 a year versus 5 a year. Nevertheless, the Department of Energy is presently involved in the process of finalizing these production goals with an eye toward determining what is needed and what is feasible.

I would like to say a word about due diligence. A previous witness here testified regarding the complexity of due diligence questions. The Department of Energy agrees with that analysis. It is quite difficult to come up with a regulatory scheme which is constructive, that covers not only the warm water exploration efforts in the gulf, but also the extremely hazardous, difficult, cold water exploration of Alaska. It is because of this complexity and because of the desire of the Department of Energy to avoid making a situation worse than it is that we have taken somewhat more time on an issue than some would like us to take.

We are at the present time sending out a notice of inquiry inviting comment from the public at large, oil companies as well as other interests to determine the proper approach recommended for a due diligence regulation.

We are, furthermore, in-house and with consultants, analyzing this complex of questions of how to set up a regulation that will be equitable and yet accomplish something with regard to intensifying the use and exploration of the leases that the companies have.

At this point, Mr. Chairman, I would like to open the matter up for questions.

The CHAIRMAN. Mr. Livingston, would you like to kick off?

Mr. LIVINGSTON. Yes, thank you.

Mr. Langenkamp, do you agree that there is no difference between your Gulf schedule and the DOI's as the previous witness indicated?

Mr. LANGENKAMP. I think there is a difference between the two of them. I think you may have pinpointed it.

Mr. LIVINGSTON. Is it strictly size?

Mr. LANGENKAMP. Part of it is size. Part of it is frequency. We have recommended three sales of a smaller size and I think the difference lies there.

Mr. LIVINGSTON. How about the quality of the program? Are yours any better or worse than DOI's?

Mr. LANGENKAMP. I don't believe we would be prepared at this time to debate the relative worth of the tracts. I think the difference probably we would focus on is the issue of size and the number of sales.

Mr. LIVINGSTON. And the what?

Mr. LANGENKAMP. The number of sales. We feel that it is better to have the 2 million acres divided among three sales than to have the 3 million acres in two sales.

Mr. LIVINGSTON. What about past performance so far? Has there been any more of a success ratio with respect to yours as opposed to theirs, or do you have any statistics on that?

Mr. LANGENKAMP. I think the record will reflect that a larger portion of the acreage put for lease is left unleased in the case of very large sales. We have found it has been difficult for the companies to focus on very large sales and that you get a higher quality of lease if you diversified the number of sales.

Mr. LIVINGSTON. Your Department has supplied this committee with certain figures indicating that the difference between the affects of your seven sales a year as opposed to DOI's recommendation of five sales a year. I think the estimates are that DOI's schedule will provide at least 1 billion barrels—will cost at least 1 billion barrels less in production although—through approximately 1982 and will cost this Nation about \$28.4 billion in the loss of balance of payments through the same period.

Would you explain how those conclusions have been reached how you might—on what you might base those calculations?

Mr. LANGENKAMP. Congressman Livingston, on page 6 of our testimony is listed the projected production under the two lease schedules. The figure that you arrived at is apparently the aggregate of the difference between the DOE and DOI schedules for each of the years.

Let me oversimplify by saying that what our analysts have done is project, based on certain assumptions, the kind of production you are likely to get under the DOE schedule versus the kind of production you are likely to get under the other schedule.

Mr. LIVINGSTON. Where is most of that production coming from, by the way?

Mr. LANGENKAMP. Well, let me refer to the architect of the production goals to give you a little more detail.

Mr. LIVINGSTON. Just generally, can you tell me?

Mr. KALTER. It depends on what year you are talking about. Early production can be obtained from the Gulf of Mexico because the time lag is much less and we are holding three sales a year because the resource base is diminishing. Getting production out of Alaska, Northern Atlantic will take longer, eight or nine years, perhaps six or seven in the North Atlantic region.

So that production comes on line in the early 1990's roughly and the early production comes from the Gulf of Mexico and then begins to taper off.

Mr. LIVINGSTON. Thank you, Mr. Chairman.

The CHAIRMAN. Mr. Langenkamp, in our March hearings the industry complained that the authority for lease sales should rest with the Department of Energy.

What is your view of the present system whereby Energy sets production goals and Interior schedules the lease sales?

Mr. LANGENKAMP. Mr. Chairman, I believe that the present arrangement is satisfactory. There is undoubtedly a certain dynamic process that is involved here whereby the Department of Energy is attempting to make a judgment from its particular vantage point and the Secretary of Interior is making a judgment from his viewpoint. But I think the kind of dialog we have seen in the last 4 or 5 months shows the statute to be in the MOU, which we have between the Department of Energy and the Department of Interior, to be a workable system.

That does not mean to say it is an easy system, but it does seem to give the Department of Energy the opportunity to make its judgments and make its views known to the Department of Interior and to have some impact on the final decision of the Secretary of Interior.

The CHAIRMAN. Mr. O'Brien?

Mr. O'BRIEN. On page 7 of the testimony, Mr. Secretary, you say, and I quote:

Cumulatively, the DOI 1980 to 1985 schedule provides only 71 percent of DOE's oil production goals and 81 percent of the natural gas goal.

In 1985, the absolute different between the two schedules is only 5 million barrels of oil and 23 million mcf of gas.

Is that a satisfactory percentage there? Would you not prefer that to be 100 percent?

Mr. LANGENKAMP. We certainly would prefer it to be 100 percent.

Mr. O'BRIEN. Why could not we have 100 percent? Why could not the two agencies be compatible with respect to the objective?

Mr. LANGENKAMP. First of all, as you are aware, on June 18 the Secretary of the Department of Interior does plan to come forward with a new leasing schedule. So it may be premature to pass judgment on what that is going to be.

Second, I would like to say that we have assumed in our lease schedules administrative constraints of approximately seven sales per year and you have heard on at least two occasions witnesses from the Department of Interior and they are certainly capable of testifying on this, saying that they think that perhaps six is the most that they could handle.

So they are built in to our figures, there are assumptions which of course the Department of Interior may or may not accept. We accept this. We are aware that there will be differing points of view but in short we would hope for an accelerated lease schedule and we think having reviewed our production goals, they are realistic.

Mr. O'BRIEN. I asked Mr. Loftis earlier and he was unable to answer, to give your professional background opinion as an attorney and your present position, what you think the impact will be on OCS with the windfall profit tax that the President has proposed and could you briefly describe how that would work?

Mr. LANGENKAMP. I would prefer not to attempt to summarize the windfall profit tax. I would say this though, to the extent that the decontrol, as affected by the windfall profit tax, will result in additional capital being made available to the companies involved in offshore production, I believe that the packaging of the two moves by the President will increase activity and will improve the situation with regard to exploration for offshore production.

Mr. O'BRIEN. You believe it will improve it?

Mr. LANGENKAMP. The combination of decontrol couples with the windfall profit tax. I think the figures indicate that there will be additional capital under the windfall profit tax which will be available to the companies for exploration.

Mr. O'BRIEN. It has been suggested that there may be a genuine question as to whether or not decontrol will come about, a tie vote in the Commerce Committee last week. What would be the implications of decontrol in compliance with the April 5 statement, that is, decontrol commencing gradually I believe in June of this year?

What would be the implication of decontrol on the OCS?

Mr. LANGENKAMP. If the decontrol were not to take place?

Mr. O'BRIEN. Yes, if it does not happen or if it does?

Mr. LANGENKAMP. I am not prepared to quantify that, but I think that the measure, if adopted or if not contravened, will have a beneficial effect on exploration both onshore and off.

Mr. O'BRIEN. I have no further questions, Mr. Chairman.

The CHAIRMAN. Mr. Livingston?

Mr. LIVINGSTON. One last question.

During your last appearance here, I understand that you had stated that you had begun sending your proposed bidding system to the Department of Interior and actually you began on September 28, 1978, and had had no response as of the date of your testimony.

What is the situation today?

Mr. LANGENKAMP. I understand, having contacted the Department of Interior earlier today, that the formal response to the OCS bidding regulations were sent out last week. They have not been received by the Department of Energy yet, but they undoubtedly—these formal comments will undoubtedly be received within the next day or so.

Mr. LIVINGSTON. They are in the mail?

Mr. LANGENKAMP. Yes, they are in the mail.

Mr. LIVINGSTON. Thank you.

The CHAIRMAN. Thank you, Mr. Langenkamp.

Without objection, I have a statement that will precede the hearing today.

Mr. LANGENKAMP. Thank you, Mr. Chairman.

The CHAIRMAN. And also Mr. Forsythe has an opening statement. Without objection, they will be so included.

[The following was received for the record:]

OPENING STATEMENT OF HON. EDWIN B. FORSYTHE

Mr. Chairman, this is the sixth day of oversight hearings this Committee has held since Public Law 95-372 was signed into law on September 18, 1978.

The first day of hearings, December 6 of last year, began with a note of optimism, and we were hopeful that the executive branch and this Committee would work cooperatively together, as would the 11 Federal Departments and agencies that have responsibilities under the act, to implement the provisions of Public Law 95-372 without any untold delay, and in accordance with Congressional intent.

Unfortunately, this was not the case according to the witnesses that appeared before this Committee during our December and March oversight hearings, and resulting proposed regulations.

Congress worked four years in an attempt to accelerate the production of energy resources on the OCS. This work began when we were importing approximately 30 percent of our total domestic oil needs. Today, we are importing just over 50 percent of our total oil needs.

When the current proposed five year leasing schedule was announced, this Committee expressed its disappointment since the schedule, for the first two years, represented a decrease in lease sales, and at its optimum, represented the schedule we had developed in the past of five sales a year.

Fortunately, the President agreed with us, and in his energy message to the nation stated that he wanted that schedule stepped up. We applaud him on his stand, and hope that this hearing will mark a change in past attitudes, and that the optimism with which the first day of hearings began will finally be justified.

We must have a leasing schedule that not only reflects our needs for increased production and expanded exploration in the Frontier areas, but we must have a total program that reflects not only statutory language of Public Law 95-372, and its intent, but the spirit of the purpose for which that act was created.

I have been disappointed with the contents of recently proposed regulations, regulations that either reflect a complete lack of knowledge of the fossil fuel energy industry, or reflect the lack of understanding of Congressional intent.

The hearings today are an attempt to eliminate some of these misunderstandings. If we are to pursue a program of accelerated production of OCS energy resources, we not only need a leasing schedule that will allow the possibility to move forward to identify and produce OCS energy resources, but we must not promulgate regulations and rules that will serve as a stumbling block to the achievement of our goals.

The CHAIRMAN. Thank you.

The committee stands adjourned.

[Whereupon, at 4:35 p.m., the hearing was recessed until Monday, May 14, 1979.]

OCS OVERSIGHT OF 1978 AMENDMENTS

MONDAY, MAY 14, 1979

HOUSE OF REPRESENTATIVES,
SELECT COMMITTEE ON THE OUTER CONTINENTAL SHELF,
Washington, D.C.

The committee met at 1:30 p.m., in room 1334, Longworth House Office Building, Hon. John M. Murphy, chairman, presiding.

Present: Representatives Murphy, Forsythe, Lott, Bonior, Lewis, Livingston, Hughes, Miller, and Emery.

Staff present: C. Grady Drago, counsel, William P. McGuire, Thomas H. Tackaberry, Carl L. Perian, Lawrence J. O'Brien, Jr., Susan Baffa, Kate Bonner, Carla Kish, and Thomas R. Kitsos.

The CHAIRMAN. The committee will come to order.

Virtually every proceeding of this committee since the first of the year has been accompanied by the sad news of some tragedy on the Outer Continental Shelf. Today is no exception.

On the night of May 10 and 11, an oil drilling platform constructed by Bethlehem Steel Corp. and owned by the Atlantic-Pacific Corp., a Houston-based drilling contractor, collapsed in the Gulf of Mexico, 12 miles southeast of Galveston; 34 men were aboard; 6 are missing, and 1 death has been confirmed.

What caused this tragedy?

What was the Government's response?

Can we avoid such unacceptable loss of life in the future?

In an effort to answer these questions and fully scrutinize events surrounding this major incident, I have formed a staff investigative team. They are in Galveston now; they left early this morning, and will conduct a thorough investigation.

Rear Adm. Sidney A. Wallace, U.S. Coast Guard, retired, will direct that investigation. He will be accompanied by our chief investigator, Gene Gleason, who worked for both the Senate and House Judiciary Committees.

Subsequent to the inspection tour by staff, it is anticipated that hearings will be held to fully air the findings. There is no more compelling issue before this committee than the protection of human life on the shelf, and we will spare no effort in assuring its protection.

Indeed, one of the paramount purposes of the 1978 OCS amendments was to improve the safety environment on the OCS, and a thorough analysis of major accidents can determine whether it is being applied successfully.

Today we culminate our first series of oversight hearings as the new select committee. Since its reestablishment as a select committee on March 29, this committee has developed an aggressive oversight agenda to insure that the rules and regulations implementing

the 1978 OCS amendments are carried out promptly and properly with a minimum of delay.

There will be full oversight hearings at least every 90 days to oversee the implementation of the act as it evolves.

Last Monday, we heard from the American Petroleum Institute, the Department of the Interior, and the Department of Energy. Today, we hear from industry, environment, government, and union representatives.

The primary focus of these hearings has been the President's recent call for accelerated leasing on the OCS and how that directive will be translated into action through the development of the new 5-year leasing program.

Again, I would underscore that the supporting documents to the President's April energy message stated, and I quote: "* * * The President is directing the Secretary of the Interior to propose additional acreage to that in the new leasing schedule."

Congressional partnership in the formulation of the 5-year leasing schedule is needed to encourage orderly and expedited OCS development and production.

To summarize the testimony thus far, industry apparently feels that the proposed 5-year leasing program is inadequate to meet our national needs. Although opinions differ in the industry, one spokesman indicated that seven sales per year would suffice. However, of equal weight to the number of sales and the number of acres offered is the quality of the leases offered.

In order to significantly increase OCS production in the late 1980's and early 1990's, it is imperative that areas other than the Gulf of Mexico must be leased as soon as prudently possible.

To maximize OCS production, high potential basins, many of which are located in harsher environments such as Alaska must be scheduled for early action.

The present schedule, industry admonished, places too much emphasis on regional rather than national interests. The Department of the Interior counters that in terms of acreage their proposed leasing schedule does not differ substantially from that of the Department of Energy.

I am going to put the rest of my statement in the record.

[The following was received for the record:]

OPENING STATEMENT OF HON. JOHN M. MURPHY, CHAIRMAN OF THE SELECT COMMITTEE ON THE OUTER CONTINENTAL SHELF, DURING OCS HEARINGS, MONDAY, MAY 14, 1979

Today we culminate our first series of oversight hearings as the New select Committee. Since its reestablishment as a select Committee on March 29, 1979, this Committee has developed an aggressive oversight agenda to insure that the rules and regulations implementing the 1978 OCS amendments are carried out properly with a minimum of delay. There will be full oversight hearings at least every 90 days to oversee the implementation of the Act as it evolves.

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In order to significantly increase OCS production in the late 1980's and early 1990's, it is imperative that areas other than the Gulf of Mexico must be leased as soon as prudently possible. To maximize OCS production, high potential basins, many of which are located in harsher environments such as Alaska, must be scheduled for early action. The present schedule, industry admonished, places too much emphasis on regional rather than national interests.

The Department of the Interior counters that in terms of acreage their proposed leasing schedule does not differ substantially from that of the Department of Energy.

The Department of the Interior is in the process of determining the best way to fulfill the President's directive. Secretary Andrus has instructed the respective departmental officers to consider the "quality" of the acreage offered, to examine the possibility of moving into frontier areas faster, and to examine how fast the program can move if additional dollars and people are provided to the program. Interior stressed that with its present administrative capability it could hold a maximum of six lease sales per year, and further indicated that it intends to have a new proposal ready by June 18, 1979, when the proposed leasing program is to be submitted to the Congress, the Attorney General and the Governors of affected States.

This committee is concerned with the coordination of OCS actions, particularly because the Interior representative cited a "diffusion of authority" as an impediment of the OCS program. This is perplexing in view of the testimony of the Department of Energy, which maintained that their relationship with interior is workable, given the interagency memorandum of understanding and other statutory authority, whereby energy sets production goals and Interior schedules the lease sales.

The Department of Energy is putting the final touches on its production goals which will be supplied to the Interior Department for their use in accelerating the leasing program. Figures provided by the Energy Department indicate that the difference between energy's accelerated leasing proposal and interior's five-year leasing proposal represents a loss of production of at least one billion barrels of oil, or about a \$28 billion loss in our balance of payments posture—facts which appear to contradict Interior's testimony.

On the issue of due diligence, Energy indicated that it has taken more time in developing administrative policy due to the complexity of developing a standard compatible to both exploration efforts in the Gulf and the extremely difficult and Hazardous exploration in Alaska.

Hopefully, the foregoing differences and contradictions will be ironed out within in administration, and the committee is prepared to provide a reasonable time to do just that.

Today, the committee also intends to fully review the process leading up to the executive order of February 28, 1979, which made foreign platforms dutiable and subject to a nine and one-half percent ad valorem import fee March 1, 1980. It is disturbing that under this time-frame two multimillion dollar rigs being built by an American subsidiary in Malaysia will be allowed to slip through the duty free door, costing the U.S. treasury approximately three and one half million dollars.

An outline of events leading up to today's hearing instructive:

On May 11, 1978, the director of the classification and value division, of the U.S. customs service issued a ruling that duties are not applicable to offshore platforms until two major components of a platform are assembled, allowing multi-million dollar platform components to come into the OCS duty free. He also indicated that the tariff could be avoided altogether if the platform came from a generalized system of preference—eligible country like Malaysia.

On September 18, 1978, after the bidding of the rigs in question, the 1978 OCS amendments were signed into law, with a provision sponsored by Mr. Miller of California making it clear that U.S. Customs duties are applicable to platforms built overseas, and brought into OCS waters.

The iron workers filed a protest petition with the office of Special Trade Representative on October 23, 1978, requesting emergency consideration, and a hearing was granted to be held on January 24, 1979.

In December, 1978, oversight hearings before this committee, Congressman Miller questioned officials of the Classification and Value Division of Customs on the process that led to steel structures being placed on the GSP list. Not totally satisfied with the responses, Mr. Miller called for the Committee to investigate the matter.

On February 27, 1979, President Carter amended the GSP list by executive order, Deleting or adding about 800 items, effective March 1, 1979. On only one of these items, offshore platforms was the effective deletion date extended to March 1, 1980.

The crux of the issue was summarized by the iron workers at our March 20, 1979, oversight hearing, as follows:

"Given the unusual nature of a solitary exception among 800-plus items, it is apparent that someone or some group is seeking special privileges since there is nothing in the written record in this case to justify such exception."

Hopefully, today's testimony will finally resolve this and other issues and guarantee future compliance with the letter and spirit of the Murphy-Jackson Amendments of 1978.

OPENING STATEMENT OF HON. EDWIN B. FORSYTHE, MEMBER OF CONGRESS,
MAY 14, 1979

Mr. Chairman, I would just like to repeat parts of my statement of last Monday for the benefit of the witnesses here today.

This is the seventh day of oversight hearings this committee has held since Public Law 95-372 was signed into law on September 18th, 1978.

The first day of hearings, December 6th of last year, began with a note of optimism, and we were hopeful that the executive branch and this committee would work cooperatively together, as would the 11 Federal Departments and agencies that have responsibilities under the Act, to implement the provisions of Public Law 95-372 without any untold delay, and in accordance with Congressional intent.

Unfortunately, this was not the case according to statements of witnesses that appeared before this Committee during our December and March oversight hearings and the resulting proposed regulations.

Congress worked four years in an attempt to accelerate the production of energy resources on the OCS. This work began when we were importing approximately 30 percent of our total domestic oil needs.

The energy problems we face as a nation are not unique to our shores, they are world wide. If we do not increase domestic production of fossil fuels, particularly oil for at least the next 25 years, I would like to know from someone how this nation is expected to survive?

The major consideration before all of us should be to accelerate the production of OCS oil and gas, and if this is done within the principals of Public Law 95-372, every segment of our society should be pleased.

Mr. Chairman, I would like to compliment you on your energetic efforts to see Public Law 95-372 implemented without any undue delays, and for attempting to get to the bottom of the unnecessary delays that have occurred to date.

I have been disappointed with the contents of recently proposed regulations, regulations that either reflect a complete lack of knowledge of the fossil fuel energy industry, or reflect the lack of understanding of Congressional intent. I am also disappointed in the recently proposed 5-year leasing schedule issued by the Department of Interior.

The hearings today are an attempt to eliminate some of these misunderstandings. If we are to pursue a program of accelerated production of OCS energy resources, we not only need a leasing schedule that will allow the possibility to move forward to identify and produce OCS energy resources, but we must not promulgate regulations and rules that will serve as a stumbling block to the achievement of our goals.

The CHAIRMAN. Our first witness is Mr. Paul Kelly, of the Zapata Corp.

Mr. Kelly, if you would proceed.

STATEMENT OF PAUL L. KELLY, SENIOR VICE PRESIDENT,
CORPORATE AFFAIRS, ZAPATA CORP.

Mr. KELLY. Thank you, Mr. Chairman.

It certainly is a pleasure to be back here again, appearing before the committee. We are certainly pleased that the House acted

favorably to enable the committee to continue its important oversight work.

Before beginning to discuss the implementation of last year's amendments to the OCS Land Act, it might be helpful, for the benefit of the new members on the committee, briefly to discuss who has what stake in offshore oil and gas.

Last week, you heard testimony from Mr. Loftis of Exxon, who represented the American Petroleum Institute. Mr. Loftis generally spoke for the companies which hold offshore leases, some of whom also belong to the National Ocean Industries Association, whom I am here representing today.

The majority of our members, however, belong to what is commonly called the offshore service industry. We are comprised of some of the world's leading companies in this field which are involved in diverse offshore service activities ranging from geophysical drilling and diving contractors, equipment suppliers, and manufacturers, supply vessel operators, to companies which design, fabricate, and install drilling, production, and other marine platforms and vessels. Some of our NOIA members are significantly involved in the shipbuilding and commercial fishing industries, as well.

We also have as member companies those who provide, cook and serve the food to the many thousand workers who earn their adventuresome living offshore helping to produce more oil and gas for the Nation.

In 1954, within a year after the enactment of the original OCS Lands Act, my company, Zapata, was one of the first companies to engage in offshore operations. It was then engaged exclusively as an offshore drilling company. During the last 10 years, the company has expanded into other ocean-related activities, including supply vessel operations, oil and gas exploration, bulk shipping, fishing and marine construction, and dredging.

So you can see that there is a diverse multibillion-dollar support industry working offshore.

After an oil company obtains an offshore lease, there are literally thousands of individual jobs that need to be done before any oil or gas contained in that given lease tract ever begins to flow ashore.

We are the companies that do all those jobs, and our several hundred thousand employees' livelihoods are dependent upon there being work to do offshore. The amount of work available for them is dependent upon how well and with what alacrity the Interior Department and other Federal agencies implement the OCS Lands Act amendments than any other single factor.

In short, the volume, speed, and efficiency with which the Interior Department and other agencies are able to offer up OCS acreage at lease sales and then facilitate the exploration, development and production of those leases has a very direct bearing on the number of jobs and job security we, the offshore service industry, are able to provide for our employees.

So too the timing and amount of new offshore oil and gas supplies that can reach American consumers is also dependent upon how last year's legislation is implemented this year as well as in years to come.

The President made clear in his energy address to the Nation last month that we must accelerate the prudent development of all our resources or face the consequences. As the chairman pointed out in his comments last week, prospects are that the U.S. Continental Shelf will be the largest increased domestic source of oil and gas between now and the 1990's, and we would like to reiterate what this committee has heard already from other industry representatives—that we are ready, willing, and able to move forward in this task.

While by and large we believe that the Federal agencies responsible for implementing the amendments have adhered to the spirit of the legislation, it is perhaps inevitable that some problems will arise

Briefly, my statement touches upon some of those problem areas including the following: The draft proposed 5-year leasing program; the coordination of and interplay between the OCS Lands Act and other legislation and its potential, delay-causing impact; the proposal to allow prelease, onstructure drilling; the development of a due diligence policy; and last, the deficiencies we perceive in certain of the regulations promulgated to date.

Now, the committee has heard a good deal of testimony on some of these issues, so in my oral presentation, I will concentrate on those where we believe NOIA has something a little different to say.

First, as far as the 5-year lease sale schedule is concerned, as you know, in March, the Secretary of the Interior published and sent to the Governors of affected coastal States for review the Department's draft proposed 5-year plan.

The Secretary stated that the proposal called for an aggressive program of leasing. Industry has expressed the view that the program is not aggressive enough.

As the Congress declared in last year's amendments, the major purpose of the legislation is to establish policies intended to result in an expedited exploration and development of the OCS.

We feel that early leasing of high potential frontier regions can have a significant impact on future OCS production levels. This theme was underscored again last week in testimony before this committee by the Deputy Assistant Secretary for Resource Applications of the Department of Energy.

In fact, as a result of the President's directive to the Secretary to propose additional acreage in the draft schedule, the Department of the Interior is investigating anew the possibility of moving into frontier areas faster than was proposed in the March draft.

The Interior Secretary stated that 26 leases in 5 years was the maximum the Department could handle administratively. We believe that the Department will be able to handle more sales than that as it rapidly gains experience in implementing the new pre-sale regulatory procedures.

We would like to see the Department hold between six and eight sales a year. We urge that the committee continue its oversight of this issue and insist upon a significant stepped-up leasing schedule.

As we noted in our testimony last December, perhaps the greatest problem encountered by NOIA members stems from the uncer-

tainties and delays that have unhappily been an integral part of recent OCS history.

Notwithstanding the fact that most members of the committee and others in Congress who voted for the amendments believed that they had lessened the delays previously encountered, recent developments suggest that this may not be the case.

The first such event is the reported opinion by the Justice Department that the Federal consistency provisions of the Coastal Zone Management Act are not limited to activities conducted pursuant to an exploration or development and production plan.

That is, the Department of Justice has indicated that calls for nominations of lease tracts, the selection of tracts for lease sale, and other OCS actions taken by the Department of the Interior may also be subject to the mandatory 3-month and discretionary 6-month review period afforded coastal States as to exploration and development and production plans.

We can envision a whole host of provisional actions by the Interior Department if the Department of Justice opinion becomes final in the form reported.

This would, in turn, very likely result in yet another source of uncertainties and delays which the Congress felt it had eliminated last year.

The second development which causes us concern is the decision by the Department to prepare a programmatic environmental impact study for its 5-year leasing program. We really react to this decision with mixed emotions.

On the one hand, we are concerned that the Department may not be able to complete its environmental impact study by next January, as it has stated. In such event, the new leasing program which the Department had hoped to have implemented and in place by then would already be facing its first setback.

In fact, since the environmental impact study process under NEPA normally requires a year or more to complete, we are fearful that the Department may be unable to set in motion the new leasing program for some time.

Finally, we must face the possibility that the environmental impact study may be subject to the time-consuming litigation that has occurred all too often with respect to offshore lease sales in the past.

On the other hand, and more positively, we believe that the long-term view would support this decision. That is, once the programmatic environmental impact study has been completed for the 5-year leasing program, it should become extremely more difficult for those completely opposed to OCS development to challenge individual lease sales on NEPA grounds.

A third development concerns the recent use of the Marine Protection, Research, and Sanctuaries Act of 1972 as yet another device to impede OCS development.

While we certainly support the need to protect the ecosystem of our offshore areas, we firmly believe that Congress took it upon itself to balance the various factors involved in offshore oil and gas development when it passed the 1978 OCSLA Amendments.

We believe that the approach taken by the Office of Coastal Zone Management in implementing the Marine Sanctuaries Act is incon-

sistent with the policy of Congress as expressed in the 1978 amendments and not in the best interests of the Nation.

For example, last month the U.S. Office of Coastal Zone Management announced its intention to place a 5-year moratorium on the development of all leases issued after the effective date of sanctuary designation for the Flower Garden Banks area offshore Texas. That this moratorium would be announced just 1 week after the President's energy message, which called for stepped-up OCS development and be made applicable to an OCS area that is felt to have substantial resource potential makes little sense at all.

We hope that the committee will have time to explore further the interrelationship of these three Federal statutes to insure that delays are kept to a minimum.

In fact, we believe that a careful review of these three acts and their interrelationship by this committee could lead to forward-looking remedial legislation.

I would like to turn my attention now to the development of the due diligence policy. In recently promulgated proposed rules, the Department of Interior has announced that, "No bid for a lease may be submitted if the Secretary finds, after notice and hearing, that the bidder is not meeting due diligence requirements on other leases."

An objective definition of diligence in our opinion is extremely difficult to establish. Such definition might be achievable if exploration of every lease involved uniformly repetitive and sequential processes and time tables. But unfortunately, in the real world, this is not the case.

At least two situations common to the OCS exploration process are illustrative for the purpose of proving this point.

The first is the situation where a prospect or structure extends across portions of two or more leases. Whether or not the lessees enter into a unitization or pooling arrangement, lessees with acreage away from the most promising locations for drilling will await the result of initial drilling on that area with the least amount of risk.

However, if the period of waiting should cause the lessee to fail to submit an exploration plan within the time period required by the proposed regulations, such lessee will be found to be not duly diligent and thus denied the ability to bid at future lease sales. And, this is a result of following what should be called a prudent and proven methodology of exploration.

A second question arises as to whether the denial of the bidding privilege applies to all the working interest owners of a lease not being diligently developed or just to the operator.

In many situations, a small working interest owner has little to say in how a lease is developed, yet that same working interest owner may be anxious to submit bids in other lease sales.

The regulations also do not make it clear how long the bidding privileges would be denied or the procedure by which it could be regained.

It is assumed that this would be left to the subjective discretion of the Secretary. Generally speaking, it is our feeling that an ill-defined regulation which threatens the bidding privilege can only add to the uncertainties associated with offshore operations, which

are already impaired by environmental challenges, regulatory restraints and built-in high costs.

From the viewpoint of a small operator, such uncertainties are discouraging when it comes to evaluating the prospects of bidding on Federal offshore lands versus investing those dollars someplace else.

It is because of these uncertainties that we believe the best approach to due diligence remains the consideration of all relevant factors on a case by case approach.

The imposition of blanket requirements will succeed only in placing unnecessary restrictions on industry which will most probably result in fast exploration but not necessarily good exploration at all.

It is our feeling that the intense desire of lessees to convert what can only be called a very expensive offshore property right into an actual income producing entity is a far greater motivator to get on with the job of exploration than wasting time meeting a deadline for filing an exploration plan that nobody intends to be implemented.

Finally, we note that the Department of Energy Organization Act gave to that Department the responsibility of establishing diligence requirements for operations conducted on Federal leases.

We are pleased to note that the DOE plans soon to take this issue in hand by asking for public comments on the best manner of approaching the due diligence concept.

I would now like to briefly discuss some of the problems we have encountered with the draft regulations.

As we previously mentioned, the Interior Department should by and large be congratulated for its conscientious efforts in promulgating regulations which carry out the congressional intent as expressed by the amendments.

However, we have encountered certain problems in addition to those requirements for exploration plans and due diligence.

The first concerns section 8(a)(1) of the 1978 amendments, which provides authority for the Secretary to deposit cash bids in an interest bearing account until the Secretary announces his decision on whether to accept the bids, with the interest earned thereon to be paid to the unsuccessful bidders as to bids that are rejected.

We are most disappointed that the Secretary has not chosen to exercise this authority and that the proposed BLM regulations at 43 C.F.R. 3316 was silent regarding any arrangement for the creation of interest-bearing accounts related to lease bids.

We would urge the committee to inquire about this matter with the Department so that smaller, independent operators will have an enhanced opportunity to participate in offshore development as full-fledged lessees.

As is becoming well-known, there are more than enough disincentives to small operators built into the act. We do not need more of them.

A second concern relates to the proposed regulations at 43 C.F.R. 3340.8, which would require BLM to charge applicants for pipeline rights of way over the OCS for all administrative costs incurred by the BLM in processing these applications.

In addition to this general cost recovery language, section 3304.8 contains a specific provision which requires applicants to repay the cost of preparing reports and statements pursuant to the National Environmental Policy Act.

In our opinion, this provision in its present form would establish a dangerous precedent. We question whether the BLM has the statutory authority to impose such a requirement without further congressional action.

In this regard, we would point out that several Federal court cases have consistently held that without specific statutory authorizations, it must be shown that the administrative costs incurred go to the benefit of the individual applicant, rather than the public at large.

We urge the committee to investigate the potential abuse of discretion on the part of the Bureau in this regard.

The third regulation that we believe is contrary to the 1978 congressional mandate is contained in the proposed regulations at 30 C.F.R. 250.12.

Paragraph 5(a)(1) of the 1975 amendments provided that any regulations providing for the suspension of operations must also provide for the extension of any permit or lease affected by the suspension or prohibition by a period equivalent to the period of such suspension or prohibition.

Despite this clearcut directive, the proposed regulations nowhere provide for the extension of lease terms or permits.

One final concern is in respect to the implementation of the best available and safest technology system. That is, in exercising their jurisdiction under the amendments, subsection 21(b) mandates that the Interior Department and the Coast Guard require the use of best available and safest technologies on all new drilling and production operations and wherever practicable on existing operations' except where it is determined that the incremental benefits are clearly insufficient to justify the incremental cost of utilizing such technologies.

The USGS published an advance notice of proposed rulemaking on February 8, in which it sought public comments on how a BAST system should be defined.

While no proposed rulemaking has yet been published, we hope the department will be kept aware of the statement of managers explanation of this requirement. Such statement, in discussing why the conferees opted for the word technologies rather than technology explains that the choice was to emphasize that more than one technology may be applicable to the best way to achieve a particular objective or to a particular job.

In conclusion, Mr. Chairman, we appreciate the opportunity to appear before this committee again. We congratulate the House for recognizing the necessity of mandating the committee to continue its important work.

Finally, we are hopeful that members of this committee will see fit to communicate to the Secretaries of the responsible Departments those suggestions made in testimony during these hearings which the members feel the Secretaries should be made aware.

By this means, the committee's intense continuing interest in accelerated offshore oil and gas development may be converted by

the responsible executive branch agencies into policies and procedures which are more responsive to the Nation's energy needs.

Thank you, and I will be glad to answer any questions.

The CHAIRMAN. Thank you, Mr. Kelly. In the March oversight hearings, industry witnesses indicated that certain sections of the proposed regulations dealing with confidential information provided to the States would probably be challenged in the courts.

What is your view on this matter, and are there any other regulations pursuant to the OCS act that might elicit court action on the part of the industry?

Mr. KELLY. Mr. Chairman, that is an extremely specific question, and frankly, I am not prepared to answer it. I will pass on that.

The CHAIRMAN. Well, suppose you, for National Ocean Industries, prepare an answer and have it submitted for the record.

Mr. KELLY. I would be glad to do that supplementally.

The CHAIRMAN. Thank you.

[The following was received for the record:]

SUPPLEMENTAL RESPONSE FOR THE RECORD

Mr. Chairman, I presume the first part of your question goes to an observation made by Mr. Carl Savit of Western Geophysical Company, who testified before your Committee on March 14. Mr. Savit, who also testified on behalf of the National Ocean Industries Association, enunciated a position I believe is commonly held in industry, that the Department of Interior's proposed regulations of January 17 of this year, i.e., 30 C.F.R. sec. 252.7 are in clear contravention of sec. 26 of the OCS Lands Act Amendments enacted last year.

As you will recall, sec. 26 of the Amendments provided that in any regulations written by the Secretary of Interior regarding the transmittal of privileged or proprietary data or information to affected states "such regulations shall include a provision that no such information will be transmitted to any affected state unless the lessee, or the permittee and all persons to whom such permittee has sold such information under promise of confidentiality, agree[s] to such transmittal."

Additionally, sec. 26(d)(2) of those Amendments stipulated that "the Governors of any affected State may designate an appropriate State official to inspect, at a regional location * * * any privileged information received by the Secretary regarding any activity adjacent to such State, except that no such inspection shall take place prior to the sale of a lease covering the area in which such activity was conducted" (emphasis supplied).

In spite of these clear directives, the Department of Interior in its proposed regulations, would allow the Governor of an affected State to "designate an appropriate State official to receive privileged and proprietary data or information regarding any field, geological structure, or trap . . . [and] relevant privileged or proprietary data and information on the possible existence of oil or gas pools or fields" when leasing activities were to be conducted within three miles of the seaward boundary of such affected State.

The Department of Interior has argued that their proposed regulations are justified by sec. 8(g)(1)(B) of the Amendments, providing that when the Secretary solicits the nomination of lands within three miles of the seaward boundary, he shall provide the Governor with "all information concerning the geophysical, geological and ecological characteristics of such regions."

Citing the judicially applied rule of construction which favors narrowly drawn, specific statutes over broad and more general ones, the Department reached the conclusion that sec. 8(g) would prevail over sec. 26.

We believe this conclusion is totally unreasonable and therefore unacceptable.

As to whether or not these regulations, or any of those that I mentioned in my statement would lead industry to a court challenge of their validity is a difficult question to answer at this time.

As you can well imagine, Mr. Chairman, we have spent a substantial amount of time preparing and submitting comments and otherwise expressing our views on these "suspect" regulations to appropriate Department of the Interior officials.

While we know of no one company that has yet established a "war chest" with which to pursue a judicial challenge of Department of the Interior final regulations,

we would expect that industry will take a long and hard look at such final regulations to ascertain whether or not our specific problems have been addressed.

If at that time, it appears the Department has continued to contravene the clearly expressed Congressional intent, and done so in such a way as to measurably increase the burdens placed on OCS exploration, development, and production, a court challenge should and would not be surprising.



May 17, 1979

Mr. Don E. Kash
 Chief, Conservation Division
 U. S. Geological Survey
 National Center (Mail Stop 620)
 Reston, Virginia 22092

Re: 30 C.F.R §250 - Oil and Gas and
 Sulphur Operations on the Outer
 Continental Shelf

Dear Mr. Kash:

Zapata Corporation engages in contract drilling, supply vessel, and oil and gas exploration activities on the Outer Continental Shelf.

The following comments are directed in response to proposed regulations published in the Federal Register of March 12, 1979 (44 FR 13527) and which are of particular interest to us based on our experience as both a small oil and gas exploration company and through Zapata Off-Shore Company as a contract driller.

Subpart 250.2 - Definitions

(o) "Knowingly and willfully" - We believe that it is inappropriate for a regulatory body to attempt to define this term in its regulations. Long the subject of definition by the judiciary, through the evolution of criminal legal theory, this term is only applicable to the criminal penalties imposed by §24(c) of the 1978 Amendments and is beyond the scope of U.S.G.S. authority. Any determination of "knowingly and willfully" should be made solely by the Department of Justice, subject to existing judicial interpretation.

(cc) "Well reworking operation" - This definition should be amended to read as follows:

"means physical activities designed to restore the capability of a well to produce oil or gas, or

both, in paying quantities. Reworking operations include, but are not limited to, efforts to recomplete a well in a different formation. ~~and the physical penetration of formations to relocate the borehole of well to a more advantageous drainage point within the same formation.~~"

The rationale for adding the phrase "but are not limited to" is that examples included as illustrations of a particular definition should not act as complete limitations on such terms. This is consistent with the U.S.G.S. practice as to other definitions contained in this proposed rulemaking, i.e., (f) "Development" and (j) "Exploration".

The reference to physical penetrations of a formation to relocate a borehole, in practice refers to sidetrack redrilling of an existing well, which is actually the drilling of new wells and not reworking operations. This approach is important in light of, and is consistent with, the recently enacted Natural Gas Policy Act of 1978.

Subpart 250.10 - Jurisdiction

Paragraph (b) of this subpart provides that "[t]he Director is authorized... to require... that all operations shall be conducted in a manner which will... result in the maximum rate of production which may be sustained without loss of ultimate recovery of the mineral resources in a manner compatible with sound engineering and conservation practices."

Initially, we would note that §302(c) of the Department of Energy Organization Act (P.L. 95-91) provides that: "There are hereby transferred to, and vested in, the Secretary [of D.O.E.] all the functions of the Secretary of Interior to establish production rates for all Federal leases." Additionally, §302(b) of the same Act grants to the Secretary of D.O.E., the authority, previously held by the D.O.I. Secretary, to promulgate regulations under the OCSLA and related statutes which relate to the "establishment of diligence requirements for operations conducted on Federal leases..."

Finally, we point out that the 1978 Amendments to the OCSLA, in §5(g), reflect the above referenced provisions of the D.O.E. Organization Act by providing that "The lessee shall produce any oil or gas, or both,... at rates consistent with any rule or order issued by the President... [or] if no [such] rule or order... has been issued,... at rates consistent with any regulations promulgation by the Secretary of Energy."

We therefore, suggest that paragraph (b) of this subpart be amended to cross reference "...the maximum rate of production established pursuant to the provisions of subsection 5(g) of the Outer Continental Shelf Lands Act, as amended. ~~which may be sustained without loss of ultimate recovery of the mineral resources in a manner compatible with good engineering and conservation practices.~~"

Subpart 250.12 - Suspension of operations and lease cancellations

Subparagraph 5(a)(1)(A) of the OCSLA Amendments provides that regulations of the Secretary of Interior shall include provisions for the suspension or temporary prohibition of any operations or activity "at the request of a lessee, in the national interest, to facilitate proper development of a lease or to allow for the construction or negotiation for use of transportation facilities... and for the extension of any permit or lease affected by suspension or prohibition [under such provision] by a period equivalent to the period of such suspension or prohibition" except in the case of gross negligence or willful violation of the terms of a lease (emphasis supplied).

First, we note that paragraph (a) of the proposed 250.12 regulations requires that suspensions at the request of lessees, in the national interest be granted only if they are for the dual purpose of facilitating proper development and allowing for the construction or negotiation for use of transportation facilities. That both of these elements must be present before a suspension is granted was clearly not intended by Congress as evidenced by the clear language of the statute. Therefore the word "and" between subparagraphs (1) and (2) of §250.12(a) must be deleted and the word "or" substituted in its place.

Second, it is clear that paragraph (b), which discusses the termination of a suspension granted under paragraph (a), is deficient in that it fails to provide for the extension of permits and leases affected by such suspensions by a period equivalent to the period of the suspension. Appropriate language must therefore be added to bring the regulation into compliance with the mandate of §5(a)(1)(A) of the 1978 OCSLA Amendments.

Subparagraph (c)(1) of this subpart also causes us concern. In addition to finding no specific authority for such a provision, it is unclear to us as to what effect such partial suspensions will have on the entire package of lease or permit rights held by the lessee or permittee. We urge the U.S.G.S. to clarify the provision, including a statement as to how such suspensions affect the term of a particular lease or permit.

Finally, we feel that paragraph (d) works to a subversion of Congressional intent through the addition of requirements not authorized by the statute. Briefly, subparagraph (d)(1) allows the U.S.G.S. to suspend operations which give rise to a serious threat of environmental damage. This much is clearly authorized by §5(a)(1)(B) of the 1978 Amendments.

However, subparagraph (d)(2) goes on to allow the U.S.G.S. the discretionary authority, when "environmental suspensions" are ordered, to require the lessee to conduct site specific studies, the content and scope of which are to be approved by the U.S.G.S. after receiving comments from all interested federal departments and agencies and other interested parties. Lessees are further required to make an unspecified number of copies of these studies available to the U.S.G.S. free of charge.

On the basis of these studies, the U.S.G.S. is to make "mitigating recommendations" to the Secretary who in turn will decide which measures must be taken by the lessee including the submission of new or amended exploration or development and production plans pursuant to 30 C.F.R. §250.34.

If the lessee cannot comply with the newly imposed requirements, the Secretary may leave the suspension in effect; however, the Secretary may not leave the suspension in effect for more than five years after which time the lease must be cancelled pursuant to §5(c) or §5(d) of the 1978 Amendments. Such cancellation pursuant to the proposed regulations will not result in compensation to the lessee.

It is submitted that through the above described manipulations, the U.S.G.S. has turned a situation of cancellation following suspension for which Congress intended that compensation be made available to the lessee under §§5(a)(1) and 5(a)(2) into a denial of compensation upon cancellation under §§5(c) or 5(d) of the 1978 Amendments.

In addition to a frightening lack of due process thinking in this provision, and a clear lack of authority under the statute, the regulation unduly burdens the lessee with the responsibility of compiling data to rebut a study largely composed by those interests opposed to oil and gas development in the first instance. While we agree that the U.S.G.S. should have hard data on which to base the continuation of emergency suspensions, it should be compiled at government expense and through an objective study which balances the need for "expedited exploration and development" with protection of the marine, coastal and human

environment, as provided in §102 of the Amendments. Finally, cancellations under paragraph (d) must provide for compensation to the lessee in accordance with the provisions of §5(a)(2) of the statute.

Subpart 250.18 - Right of use and easement

Subparagraph (c)(1) of the subpart has deleted language contained in present regulations granting to the Supervisor [Director] the ability to issue to a holder of a state lease, a right of use or easement to construct and maintain a pipeline across a federal lease, where the state extends the same rights to holders of federal leases. Because there is no basis for this deletion in the amended Act, and because such a right is of great practical merit, particularly in the Gulf of Mexico offshore Louisiana and Texas, it ought to be retained in its present form.

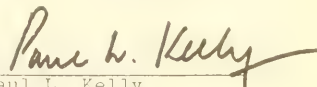
Subpart 250.45 - Accidents, fires and malfunctions

This subpart requires the lessee to immediately notify the U.S.G.S. of "all serious accidents, any death or serious injury, and all fires on the leased area." The only problem caused by this regulation is the apparent conflict or division of authority between the U.S.G.S. and the Coast Guard. That is, section 22 of the 1978 Amendments, from which the authority for this regulatory provision flows, leaves jurisdiction as to injuries, deaths, and fires to both the Coast Guard and the Interior Department. The Statement of Managers (S.Conf. Rept. 95-1091, August 10, 1978, pages 111-112) makes it clear that the conferees "were aware that the Coast Guard has broad authority and responsibility for safety and health under this Act..." It also makes it clear that the Coast Guard and Interior Department are to consult with each other, as well as other interested federal agencies so that coordination of investigations is maximized and duplication of effort is minimized. We urge the U.S.G.S. to undertake this coordination effort, possibly in the form of a Memorandum of Understanding, so that it is clear which agency has jurisdiction over what type of accident and to whom the lessee is responsible for reporting purposes.

We appreciate the opportunity to comment on this proposed rulemaking.

Sincerely yours,

ZAPATA CORPORATION

By 
 Paul L. Kelly
 Senior Vice President-
 Corporate Affairs



United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

Honorable John Murphy
House of Representatives
Washington, D.C. 20515

Dear Mr. Murphy:

In response to your letter of May 23, 1979, I am forwarding a point-by-point discussion of the concerns raised in the testimony offered before the Select Committee by Mr. Paul L. Kelly on behalf of the National Ocean Industries Association. Because you have requested an early response, and because a number of regulations are in the process leading to promulgation of final rules, I am unable to give final answers to every point raised by Mr. Kelly. I am, however, able to respond to each concern and, I believe, adequately explain the actions of the Department in terms of the constraints and goals of pertinent statutory requirements.

We appreciate the Committee's interest and hope the enclosed discussion will be useful to you. I do want to repeat that rulemaking requirements prevent a full exchange on some matters which are still under consideration in the Department, but for which the public comment period is closed.

We are always available to answer any questions you may have about implementation of the Amendments to the OCS Lands Act, so please do not hesitate to call on us.

Sincerely,

Heather L. Ross

Deputy Assistant Secretary--
Policy, Budget and Administration

Enclosure

RECEIVED
REP. JOHN M. MURPHY

Point-by-Point Discussion
Concerns Raised by Paul L. Kelly
Oversight Hearings, May 14, 1979
Select Committee on the Outer Continental Shelf

1. Draft Proposed Five-Year Leasing Program

The draft proposed five-year leasing program addressed by Mr. Kelly has now been overtaken by a more recent Secretarial decision on a proposed program. This proposed program will be submitted to the States, to Congress and to the Attorney General, for comment, as required by the OCS Lands Act Amendments of 1978 (the Amendments).

The current proposal reflects comments from Governors, environmental groups, industry and others, and the President's April 5th directive that more acreage be added to the March proposal. That earlier proposal would have scheduled 26 sales over five years (with four sales as contingency sales in the event substitutions were required). The proposed program of June would increase the quality of the areas to be offered in the five-year period and add four sales, for a total of 30 sales in five years. A press release describing this proposal is attached.

The Department of Energy (DOE) derived its production goals by preparing a schedule of leases totaling 32 sales over a five-year period. The DOE schedule was determined by timing and locating sales so as to maximize the net economic value of the schedule, given GS estimates of resource potential. The differences between the DOE schedule and Interior's proposed program reflect the Secretary's decision to consider entering a broad range of new frontier areas earlier than would occur under DOE's schedule. This responds to industry's ranking of areas for exploration interest and will result in an earlier inventory of promising OCS areas.

2. OCS Lands Act, as amended, and Other Federal Requirements

(a) The April 20, 1979, opinion from the Department of Justice, to which Mr. Kelly referred, discusses the applicability of section 307(c)(1) of the Coastal Zone Management Act to Department of the Interior's pre-lease activities and concludes that (c)(1) does apply. This part of section 307 requires that Federal activities directly affecting the coastal zone be consistent with approved coastal zone programs to the maximum extent practicable. We do not at present anticipate that the opinion will result in any delays, either to the lessee or the Department, in implementing the leasing schedule. Should our assessment of the likelihood of such delays change, we would notify you of the nature and reason for the change.

Mr. Kelly's comment addresses another part of the Coastal Zone Management Act, section 307(c)(3). This part of section 307 deals with the issuance of licenses and permits by a Federal agency and was not affected by the April 20 opinion. There are no additional "mandatory three month and discretionary six month review" periods as a result of the applicability of section 307(c)(1) to Department of the Interior pre-lease activities.

(b) The Environmental Statement being prepared on the five-year leasing program will not cause delays. It is scheduled to be published in final form by January 1980 which is in sufficient time to complete development of the 5-year program within the timeframe established by the Amendments.

(c) Marine sanctuaries have been proposed, and are under active consideration, in several OCS areas. As to the Flower Garden Banks off Texas, the Department of Commerce has published a draft Environmental Statement and proposed rules for controlling activities in the sanctuary. The Department of the Interior has put constraints on oil and gas operations in the Flower Gardens area for over five years in order to protect the coral and associated organisms. Neither Interior nor Commerce is aware of any damage to the coral due to oil and gas operations. However, there has been documented physical damage caused by anchors and anchor lines.

The Department of the Interior supports actions to protect the Flower Garden Banks, such as sanctuary designation, but does not agree that a five-year moratorium on oil and gas operations, or other controls on such operations beyond these currently imposed by Interior, is necessary or desirable. The Department of the Interior has informed the Department of Commerce of its position in comments on the draft Environmental Statement and other correspondence.

3. On-Structure Drilling

Proposed rules have been issued for comment (30 CFR 251) which include authority for approval of requests for test drilling in areas where oil and gas are suspected to occur, prior to leasing of the area. Since the comment period on the regulations is closed, we are limited in engaging in discussions of the regulations.

The proposed change in the regulations does not go beyond the authority in the language of the 1953 Outer Continental Shelf Lands Act which was left unchanged by the Amendments. Section 11 of the Act authorizes the Secretary to issue permits for geological exploration when such permits do not result in interference with lease rights and do not unduly harm aquatic life.

This proposed change from previous procedures does nothing more than allow industry full flexibility to decide where it would like to undertake pre-lease test drilling. If adopted, it will remain industry's decision as to where the tests will be drilled, subject to approval of the permit by the U.S. Geological Survey.

4. Development of Due-Diligence Policy

The regulations published for comment by BLM do require that due diligence on "other leases" exist before a bid is accepted on any new lease. As Mr. Kelly points out, this provision repeats a provision in the Amendments. It adds nothing to what is currently required by statute.

It is necessary, before invoking this regulation, to give notice and conduct a hearing. This is a provision of the proposed regulation and of the statute.

The broad policy of the Department is that industry promptly and efficiently explore and develop the Federal leases which it acquires. This means that lessees will be expected to complete sufficient exploration so that, if conditions warrant, a good start is made toward the initiation of production within the primary term of the lease.

DOE does have authorities, under the Department of Energy Organization Act, to issue regulations on diligence and to establish rates of production. With or without such regulations, there is the requirement, and authority, for the Secretary of the Interior to assure that oil and gas activities are conducted in a diligent manner.

The provision that exploration plans be submitted within a certain time is contained in proposed rules, 30 CFR 250.34. The Department is currently assessing the comments on this regulation and, since the public comment period closed on March 16, no further discussion of Mr. Kelly's views can be given here. However, as Mr. McCloskey of this Department indicated in his testimony of May 7, this matter is receiving active attention within the Department. The final regulations will be issued in the near future.

5. Problems With Draft Regulations

(a) The language of section 8(a)(1) of the OCS Lands Act, as amended, authorizes the Secretary of the Interior to "establish interest bearing accounts" to permit interest to be paid to unsuccessful bidders whose deposits are returned.

In implementing the Amendments, the Department has had extensive consultations with the Department of the Treasury in an effort to establish such accounts in the Treasury of the United States. The Amendments do not, however, specifically authorize Treasury to pay interest on such accounts and, in the absence of enabling legislation, Treasury maintains that such interest cannot be paid. In section 302 of the Amendments, the Congress did explicitly authorize the Treasury to invest funds in interest-bearing obligations. Investing the bid deposit funds acquired from potential lessees in commercial accounts or in other similar ways was also investigated by us with Treasury, but was rejected because of the financial risks which would be encountered, the administrative burden, and the Treasury's loss of the use of funds which had been collected by an agency of the Government.

The deposits by bidders may now be kept for up to 60 days, 30 days more than the period authorized by regulation prior to the Amendments. The full 60 days has never been used, and will not be used unless it is necessary to do so. The 30 days were added to accommodate the time period associated with the requirement in the Amendments for a review of the results of a lease sale by the Attorney General before the bids can be accepted. This has added to the cost of doing business since it is apparently not possible to pay interest on bid deposits under existing law.

(b) The requirement in 43 CFR 3340.8 for charging certain administrative costs of pipeline rights-of-way is a proposed rule. Since the comment period for this proposed rule has closed, we are not able to discuss the rule further in this context. Mr. Kelly's comment and views are shared by others and whatever is decided will be in accordance with relevant statutory constraints.

(c) The granting of lease term extensions for periods during which operations have been suspended is covered in the regulations at 43 CFR 3319.9 (proposed). These rules are quite clear and reflect the directive of the Amendments quoted by Mr. Kelly (section 5(a)(1)). The proposed regulations at 30 CFR 250.12 are not clear, as Mr. Kelly and others point out. This ambiguity will be corrected when final rules are published. The requirement of the Amendments will be implemented.

(d) The implementation of the "best available and safest technologies" requirement of the Amendments is proceeding. The Department is aware of the legislative history associated with the use of the word "technologies" and believes that the Advance Notice of Proposed Rulemaking, published in the Federal Register on February 8, reflects an interpretation of section 21(b) of the Act consistent with Mr. Kelly's view.

The comments received in response to the Advance Notice have been forwarded to the Marine Board of the National Academy of Sciences for evaluation and recommendations. An answer is expected in July and at that time the Geological Survey will determine whether regulations are required to assure the use of best available and safest technologies.

DEPARTMENT of the INTERIORnews release

OFFICE OF THE SECRETARY

For Release June 19, 1979PROPOSED FIVE YEAR OCS OIL AND GAS LEASING PROGRAM
SUBMITTED TO CONGRESS

The proposed five-year oil and gas leasing program for the Outer Continental Shelf (OCS) has been formally submitted to the Congress, Secretary of the Interior Cecil D. Andrus said today.

As required by the OCS Lands Act as amended, the proposed leasing program, covering the period from March 1980 through February 1985, will also be submitted to the Governors of the affected coastal states and the U.S. Attorney General, and published in the Federal Register.

In announcing details of the program June 8, Secretary Andrus said the schedule was designed to increase the chances for producing more oil and gas in offshore areas.

"In developing the schedule, we have provided for earlier consideration of certain Alaskan frontier area sales where the resource potential is the highest," Secretary Andrus said.

Details of the program, including the timing of all of the pre-sale steps, are provided in the attached schedule. This schedule also notes the sales planned for 1979: OCS #48, Southern California, June 1979; OCS #58, Gulf of Mexico, July 1979; OCS #42, North Atlantic, October 1979; OCS #58A, Gulf of Mexico, November 1979; and the joint Federal-State Beaufort Sea sale, December 1979.

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The CHAIRMAN. What are your concerns regarding the proposed regulations on the question of denial of bidding privileges to potential lessees that the Secretary of the Interior has determined have not exercised due diligence on existing leases?

Mr. KELLY. Mr. Chairman, as I pointed out in my testimony, I think that this is an extremely sensitive issue. We have a number of NOIA members who are small companies, and we believe that the threatened denial of the right to bid on lease sales adds for these smaller members an additional disincentive to participating in Federal offshore lands.

It is not clear, for example, whether the denial of a bidding right to an operator extends to the other participants in the lease. We would like to have that clarified.

We think that due diligence is a concept that really needs to be approached on a case-by-case basis. As you approach a particular lease tract, as you approach a particular well, the conditions are going to be difficult on each one—the geological conditions, the drilling procedures that are followed, are going to create separate standards in each case.

We hope that the department will not try to overgeneralize its development of this concept.

The CHAIRMAN. Do you think that some of the smaller people who win leases delay their development, waiting to find out what is on other adjoining leases before they would start their development?

Mr. KELLY. I think this occurs basically where there may be an overlapping structure, as I pointed out in my testimony, between two tracts. I do not believe that smaller operators, as a general rule, will generally delay proceeding on the development of a tract by waiting for what happens on other blocks in the area.

The CHAIRMAN. In terms of expediting OCS development, the Department of the Interior has recently testified that with present resources, it could handle a maximum of six lease sales per year.

In your opinion, what is the optimum number and mix of lease sales that the industry could handle per year?

Mr. KELLY. Mr. Chairman, I think that industry could probably handle up to eight lease sales a year.

The CHAIRMAN. Mr. Bonior?

Mr. BONIOR. No questions.

The CHAIRMAN. Mr. Forsythe?

Mr. FORSYTHE. Thank you, Mr. Chairman, and thank you, Mr. Kelly.

I would like to go back a bit to the due diligence area which you have been discussing with the chairman. I understand that DOI, for instance, is requiring the filing of exploration plans within a 2-year period, and are claiming that this is not a due diligence standard in order to avoid conflict with the mandate that diligence standards are a DOE prerogative with consultation with DOI.

Do you feel in any way that that kind of requirement is anything but a due diligence standard?

Mr. KELLY. It sounds to me as if it is trying to be constructed in that way, Mr. Forsythe. And again, I would say that we hope that the Department of the Interior will be careful not to develop too rigid standards with respect to the timing of the filing of these

exploration plans, because generally what happens with respect to the exploration on a lease tract is that an operator develops its exploration plan as it goes along. It makes a decision to drill an exploratory well, and what happens from that point forward is a matter of the result of their geophysical surveys, what sort of practical experience they have once drilling commences.

I think that the legislation only requires the submission of an exploration plan prior to exploration and does not set any definitive time schedule. And I hope that Interior will not be too rigid in this regard. This question somewhat relates to the question Mr. Murphy raised. I think that the greatest incentive you have—and this applies to the large companies as well as the small companies—is that when these companies have put up millions of dollars in the bidding process, generally speaking, they have borrowed the money, and they have interest expense running. They want to return, to get a return on this investment, as soon as they can. And I think that this is probably the best incentive we have for companies to get on with the exploration process. They are not going to get property rights to lease tracts and then just sit on those rights and let their interest expense run. Their stockholders are not going to permit them to do that.

Mr. FORSYTHE. You do not consider that a good investment for company money, if the lease is not being worked on.

Mr. KELLY. That is correct.

Mr. FORSYTHE. Well, you are telling me that the exploration process actually is a continuing matter from when you first will start at a given area, both as to where you go with the next well, how deep you go, and all of these things, and to get rigid just kind of blocks that kind of prudent management of the development of the resource.

Mr. KELLY. That is correct.

Mr. FORSYTHE. Thank you.

You mentioned this problem with technology, the best and safest technology. And it was an area in the passage of this bill that had great concern to me, because no way did I believe that the Federal Government should be put in the position of saying, "This is it."

But do I understand in the call for comments on BAST that DOI has assumed that they would have to set up a testing laboratory to determine what technologies were the best available and safest? To my knowledge, there is nothing in this legislation that authorizes this. Would you comment on this procedure that apparently is being pursued?

Mr. KELLY. Yes, sir, I would be glad to. I think the Interior Department has called for comments on the best way to approach this subject, and I believe many who listened to that call felt that there was some implication that perhaps the Federal Government should, in the extreme, set up some sort of testing procedure or laboratory to make a determination of what BAST is. But in this industry, and indeed with respect to any industry, this would be the wrong approach.

I think that in the first place, one of the most attractive elements about offshore oil and gas exploration and development, when you compare it to other potential sources of energy such as solar, is that the state of the art in terms of technology is already

well-advanced. There is very little new technology that needs to be developed for the United States to get out there and exploit its offshore petroleum resources.

We have the capacity to drill in virtually any depth of water on the coasts of this country, so we are already in an advanced state of technology in terms of this source of energy versus others.

The reason that we have that advanced state of technology is that there has been a high degree of competition among companies who provide drilling services to the leaseholders. And most of the technology that is used offshore worldwide has been developed by U.S. companies.

I think that the competition itself is going to be the best way to develop the best available and safest technology. Let me cite an example. Let us suppose that some sort of objective testing procedure were to be set up by the Department, and they were to issue some sort of release that stated that the best available and safest blowout preventer was made by XYZ company, and that henceforth, all operators on the OCS should use this blowout preventer.

Well, in the first place, that would give that company a virtual monopoly over the equipment, and second, although ABC company, which lost out in the test, might have had a second-best product, if a finding is made that the other one is to be used, they no longer have an incentive to improve their product, and to make a better one than XYZ company.

So I think that the concept of BAST already is pretty well under control, and I think that it should be left to competition to determine what is BAST.

Mr. FORSYTHE. In your view in this field, that safe is everybody's concern, and the difference between safe and safest is something that probably is almost unattainable in terms of rational decision-making, and by forcing it to that kind of a thing, you do as you say—you stop competition, you create a monopoly, and you may well have stifled the next generation of safety; would that be a fair analysis of what you are trying to say?

Mr. KELLY. Yes, sir.

Mr. FORSYTHE. It seems to me that this is a very important area, because anything that might stifle further development in safety would be a tragedy in terms of the industry and employees. I am a little bit concerned over your statement that we have it all. You did not quite go that far in your statement, but I do not think we ought to leave the impression that we are ever at a point where we have solved all the technology problems in whatever area we are involved in. I think that is one of the secrets of the whole technological framework of this nation, and of its industries. It certainly has been proved so down through the years.

Mr. KELLY. I think that is certainly true, and I did not mean to intend that we have it all. There are some areas where some work is yet to be done. If we are going to be looking at some of the more difficult frontier areas such as Alaska, there is still work that needs to be done on how we work under conditions where you have ice, so I think there are some areas for improvement.

Mr. FORSYTHE. Maybe I had better let my colleagues ask a few questions. Thank you

The CHAIRMAN. Mr. Livingston?

Mr. LIVINGSTON. Thank you, Mr. Chairman.

Mr. Kelly, you indicated that you thought that industry could handle about eight sales a year, and DOI, I think, is on record as saying the maximum that they can handle is about six sales a year.

I have a computation here that shows DOI's schedule represents a potential loss of at least 1 billion barrels a year as a result of the late offering of high potential areas.

Would you or would you not agree with that particular statement?

Mr. KELLY. I am not familiar with the source of the statement, but it sounds plausible to me that we could be facing that sort of loss.

Mr. LIVINGSTON. All right. I am told that DOE actually made that statement.

Mr. KELLY. I see.

Mr. LIVINGSTON. Can you accept that?

Mr. KELLY. I think I can accept that, yes, sir. I can say that in terms of equipment availability, that if the lease sale schedule were accelerated over and above what is presently planned for—say, up to eight sales a year—that certainly there would not be any shortage of equipment necessary to do the job.

Mr. LIVINGSTON. Your own industry could meet the needs for eight sales a year?

Mr. KELLY. That is right. And if the committee is interested, I would be glad to submit detailed information. But our general consensus is that in terms of offshore drilling rigs, both in terms of rigs presently available and our capacity to construct new ones without really changing or expanding U.S. shipyard capacity, we could meet that many sales handily. And the same applies to the other components of the offshore exploration process, supply vessels, geophysical vessels. We have a number of vessels already in our U.S. fleet that are working overseas now, because there has not been enough work for them to do in the United States.

We could return vessels to domestic waters easily, and on a fairly short time frame, construct any additional ones that would be required.

Mr. LIVINGSTON. Going back to this statement attributed to DOE, are there any facts at your disposal, sir, which would lead you to believe that areas of lesser potential are being let for sale rather than areas of greater potential?

Mr. Kelly Yes, sir. It is our impression that there are some areas of greater potential, particularly in Alaska, that have been ranked down the line, and the country could benefit if these were moved forward in the lease sale schedule.

Mr. LIVINGSTON. You say it is your impression. On what facts would you base that impression?

Mr. KELLY. Just on—again, we are primarily the service industry, but when we hear discussion of general geological interest on the part of producing companies, generally speaking, throughout our industry, there are conversations about what areas look very prospective and which ones seem to have high potential. And what we hear is that some of the high potential areas have not been ranked high enough.

Mr. LIVINGSTON. I see. And I noticed in your review of your statement that you did not emphasize the position of onstructure drilling. Is onstructure drilling a concern of your industry, sir?

Mr. KELLY. Yes, it is. It is a concern, as we outline in the statement itself, but I just thought the committee had heard quite a bit of testimony on this issue, so I just arbitrarily decided not to address it again.

But we do not feel that onstructure drilling would be the answer in that it would really help the industry learn much about an area prior to lease sale, and we do not believe that it would necessarily accelerate the exploration process.

Mr. LIVINGSTON. Do you know of any instance around the world where onstructure drilling is used by a particular country?

Mr. KELLY. No, sir, I am not aware of any. For example, what would onstructure drilling have contributed to our knowledge of the Baltimore Canyon or to its rapid exploration?

I think that when people discuss onstructure drilling, they think about a successful wildcat and what a discovery might do. But very often, you are going to have a dry hole. And, as we discovered in the North Sea, you can drill a whole series of dry holes and still not discover the resource until you do something different.

I think that if we adopted onstructure drilling in lease sale areas where the onstructure well was a dry hole, you might create both low bonus bids and a lack of interest on the part of the bidders. And you might not make a discovery in an area that had some potential, if people took a little more longer-term approach to it.

Mr. LIVINGSTON. If oil were discovered in an onstructure rig, what would be the likely result of that discovery?

Mr. KELLY. Oh, I think that—it is difficult to say. I think some companies might not be impressed, because one well never tells the whole story with respect to a tract or a sale area.

It might also increase the bidding. It might increase prices paid and discourage small companies from participating in the sale area. That is the thing that I would probably be most concerned about, since many of the companies that we represent are small companies that, let us say, you had an onstructure well, and a discovery was made. That would probably effectively set aside that sale area for all the big major companies, because the small companies would feel that the stakes were too high for them, that they would have to go in with very high front-end bonus bids, and it would be high risk, because one well would not necessarily mean that there was something there for them.

Mr. LIVINGSTON. I share your concern, Mr. Kelly. If you were to make changes to the current law to assure that certain requisites were met to increase small company participation in this industry, what would be your highlighted items?

What steps are most important to you in order to insure small company participation in the offshore industry?

Mr. KELLY. All right. I know the committee has been very interested in this whole subject, so it might be worth talking about it a little bit.

I know that the development of the sliding scale royalty system, for example, was intended to try to increase the participation of small companies.

We have not had that much experience since the adoption of the amendments, but so far, we do not see an awful lot happening that indicates that small companies are increasing their participation in the Federal offshore lease sale process.

What is happening instead is that companies like my own—which is also a small exploration company—are instead choosing to participate in offshore drilling in State lands, or we are participating by taking farmouts in already mature and proven areas, primarily the Gulf of Mexico.

All right. Why? What is the reason for that?

In the first place, the offshore play is an extremely costly one. The cost of drilling an offshore well in the water depths where Federal leases exist is extremely expensive, much higher than drilling in coastal waters or on land.

Second, there are the regulations under the OCS Lands Act. A lot of companies have difficulty just reading the Federal Register and keeping up with all the proposed regulations that are coming out, and they are not inclined to hire lawyers or to have a government relations officer in their company that is paid to keep up with this. They have difficulty justifying it from a cost basis.

So when they look at what they consider to be a considerable amount of redtape in connection with Federal offshore leasing, they decide, "Well, it is better to put our money someplace else."

One regulation recently, in particular, that really seems to have taken its toll are the oilspill liability provisions issued under title III.

Insurance which small companies would have to purchase to buy the \$35 million in oilspill liability insurance is extremely high, and most companies cannot tolerate that cost.

Second, I think you have to recognize the concept that, with respect to small companies, there is a greater demand for them to get a return on their investment sooner than with a major oil company.

They are smaller companies, they have a smaller number of stockholders, their financial performance is watched fairly carefully, and they have difficulty in thinking in terms of putting up several million dollars in a bonus bid and then looking ahead at a return of investment 5 to 10 years away. This makes it difficult.

The regulatory procedures issued under the amendments in the act by the Interior Department that call for exploration plans, development plans, and environmental impact statement prior to the lease sale, and environmental impact statement prior to production, all of these things build in potential delays. So they have difficulty accepting the risk of participating in these lease sales when they know that there could be several years ahead of delays.

The history of litigation offshore has turned off a lot of small producers, as well.

Now, if changes could be made that would eliminate some of these problems, you would find more of them participating; but that may be difficult to do. I would say that the main thing is to try to make the process move along as quickly as it can, to reduce the amount of time between the point at which a small company makes an investment and the time in which it stands to reap some return on that investment.

Mr. LIVINGSTON. Thank you very much, Mr. Kelly. I think you have hit on some of the key problems that this committee faces. Thank you, Mr. Chairman.

The CHAIRMAN. Mr. Hughes?

Mr. HUGHES. Thank you, Mr. Chairman.

Welcome, Mr. Kelly. I am interested in your testimony in particular with regard to onstructure drilling found on page 12. I apologize for not catching some of your comments in response to questioning by my colleague from Louisiana.

But you indicate that you do not feel that onstructure stratographic drilling is going to produce very much, and in fact, it could lead to the opposite result, for example, it could mislead those that would participate in that type of a venture.

Is that accurate?

Mr. KELLY. That is accurate, Mr. Hughes, yes, sir.

Mr. HUGHES. You are not suggesting that the industry is not so sophisticated at this point that it does not understand very well that it cannot really tell what is in a given structures until you sink a number of wells. The industry surely concedes the point that even in areas that have been explored quite well, such as in the Gulf of Mexico, we do not know the nature and extent of oil and gas in structures until you have completed a number of wells.

Mr. KELLY. That is correct.

Mr. HUGHES. In some areas in the Gulf of Mexico, as I understand it, some of the companies have been sinking wells for 10 or 15 years and still do not know the nature and extent of the structures.

Mr. KELLY. Absolutely.

Mr. HUGHES. So how could a company that has that type of experience be misled into believing that one dry hole, sunk onstructure means that the entire area is worthless? I do not understand that logic.

Mr. KELLY. Well, I do not know if you were present, but I answered a similar question, and I think you are right. There are a number of mature companies who are going to respond to a discovery and say one well does not tell the whole story on a lease tract.

But still, it could change the nature of the bidding process. And I would be concerned, as I said to Mr. Livingston, about what kind of an impact this would have on the smaller company, which we are primarily concerned about.

The point I made was, let us say you have a discovery onstructure. The lease sale that follows that discovery is probably going to be limited to the big operators, to the majors, because I think that it might not affect the prices, but more than likely, it would. And I think the small guy would feel like it would, and he probably would not want to enter the play.

Mr. HUGHES. Some of the small operators that I have talked to felt that onstructure could conceivably—not necessarily—could conceivably put them in a better bargaining position in that if they do determine by an onstructure well that there are hydrocarbons in commercially extractable quantities that they then have something to go to their financiers and their backers with to secure the necessary financing to participate a lot more actively.

Mr. KELLY. I think that their financiers would have to assume that the discovery was pretty surely an indication of a good sized reserve.

Mr. HUGHES. Well, it has been my experience that it has been the major oil companies primarily that have opposed the onstructure stratographic drilling, almost without exception. I cannot think of one major oil company that has supported the concept. And yet, we have had some small independent operators that have supported at least the effort. So that is inconsistent with your suggestion that it would work to their disadvantage.

I can imagine independents looking for methods to enable them to pursue their business ventures even more aggressively; can't you? And they are going to look for techniques to try to improve their ability to get a bigger share of the market.

Mr. KELLY. Well, we have a number of independents in our association, and we have not detected any majority support among them for onstructure drilling.

Our experience, for example, as a drilling contractor, we have no axe to grind with respect to onstructure drilling. But yet, our experience as a drilling contractor, just in terms of drilling the wells and seeing when there are discoveries and when there are not, lead us to believe that there really is not anything to be gained by onstructure.

Mr. HUGHES. Well, let me ask you a question. Do you believe that if a permit were offered in the private sector, that there are companies that would avail themselves of the right to sink onstructure test wells?

Mr. KELLY. I do not know. Probably there would be.

Mr. HUGHES. OK. Now let me take it to the next step. Why do you think there would be oil companies that would want to avail themselves of that?

These obviously must feel there is some advantage.

Mr. KELLY. I do not know. I do not have enough experience as a producer myself to really answer that.

Mr. HUGHES. Well, we have to assume, I would suggest, that——

Mr. KELLY. Excuse me.

[Conferring with colleagues.]

Mr. HUGHES. We have to assume, I would suggest, that oil companies interested in securing such a permit would only do so if they thought there was some advantage.

Mr. KELLY. Well, I think that they probably do it largely because of concern for their competition. They would not——

Mr. HUGHES. Yes, but there has to be somebody, first of all, to avail themselves of the permit before the competition sets in.

I understand—some of the majors who have appeared here and testified have indicated they would, in all probability, avail themselves of such a permit, too, if others did. If others sought a permit to sink a test well in the structure, they may be forced into doing it, too.

Exxon testified at one point, as I recall, within the past few months, that they were not very anxious to see cost wells put in place as one of the procedures used by the Department of the Interior to get more information prior to lease sale. But Exxon became a reluctant participant. And when we questioned why, the

answer was that they do not want their competition to secure any more information than they get: Well, that works on the assumption that an onstructure stratigraphic well is going to furnish information to somebody, or they would not apply for it.

By the same token nobody is going to spend several million dollars for an onstructure stratigraphic test well unless they feel that it is going to be economically beneficial. Wouldn't you agree with that?

Mr. KELLY. My inclination is to believe that they are doing it largely for competitive reasons, to make sure that the next man does not get ahead of them——

Mr. HUGHES. You know, the difficulty, Mr. Kelly, with the industry's position on this is it is just not logical. It flies in the face of logic.

I mean, nobody is going to seek a permit to sink test wells and spend that kind of money unless they feel they are going to get some information from it.

Wouldn't you agree that that makes some sense,

Mr. KELLY. Well, yes. I think you are probably right.

Mr. HUGHES. I do not understand why the reluctance on the part of industry to suggest that there are some people in the business that feel that perhaps it could produce information that might not otherwise be available.

Nobody suggested that we are going to determine the nature and extent of hydrocarbons in a structure by sinking one or two or maybe even a half a dozen onstructure wells. But isn't it possible that when over \$1 billion was sunk in bonuses in the Baltimore Canyon that an onstructure stratigraphic test well in the dome might have led the industry in another direction, in other areas of the Baltimore Canyon?

Mr. KELLY. Well, I think——

Mr. HUGHES. Isn't that so? I mean, can't it be helpful from the standpoint of giving us some direction as to where the highest potential for oil and gas resources might be in a given area?

Mr. KELLY. I am not sure that it necessarily does. But you know, when you look at the industry's position on onstructure drilling, I think a lot of it has to do with the concept that if there are oil and gas reserves on a structure, that those reserves should belong to the leaseholder as his property.

And I think that there is also some concern over what would happen as time goes on and whether there would not be a growing public demand for more onstructure——

Mr. HUGHES. There is the paranoia. That is where the suspicion creeps in. It is the belief that if in fact the Department of the Interior offers one permit for an onstructure test well that it might determine that there are hydrocarbons and that there would then be such public clamor that there would be demands that the Government begin to explore. I think that is at the base of much of the reluctance on the part of the industry.

Mr. KELLY. I think you are right.

Mr. HUGHES. One thing else disturbs me. You indicate that you do not think that the Secretary of the Interior has the authority to permit onstructure stratigraphic drilling. I am at a loss to under-

stand that, because the Secretary of the Interior has the authority to offer permits in the private sector for onstructure cost wells.

Now, if the industry believes that the Secretary has the authority to issue permits for onstructure, how can it assume that the Secretary does not have the authority to offer permits for onstructure test wells, What is the logic of that position?

Mr. KELLY. Well, I think the logic of that position is that drilling onstructure is drilling for oil and gas, and that the right to drill for oil and gas is reserved under the law to those who own a lease.

Mr. HUGHES. Well, that is inherently illogical, because first of all, the cost well is an information well. Not very long ago—in fact, in December 1978, a cost well was sunk in the Baltimore Canyon that showed a significant show of hydrocarbon. And in that instance, there was no suggestion that those who participated in that particular cost well had any inherent right to those resources. That was an information well.

Nobody has ever suggested that an onstructure stratigraphic test well would be anything other than an informational type of technique to enable the Department of the Interior and the industry to get more information, if possible, prior to lease sale.

Isn't that so?

Mr. KELLY. Well, I think that the legal concept is probably one that is going to be litigated at some point, if the Secretary goes forward with it.

I think the Congress and the committee were sufficiently uncertain about the legality of onstructure drilling that nothing was done in terms of creating a more specific right for the Secretary at the time the amendments were adopted.

So I think it is a difficult issue as to whether the Secretary has the legal authority or not. And I think it is something that may end up just being tested in court.

Mr. HUGHES. Well, the members of the committee felt that the Secretary did have the authority under existing law, and the conference committee that you refer to that struck the provisions dealing with onstructure stratigraphic drilling only dealt with a mandated, one-time effort. The provision was struck in conference when we were hung up for an inordinate amount of time, in the closing days of the conference, on the assumption that we would go back to the original law which gave the Secretary that flexibility anyway. But it did not mandate that he provide permits for onstructure stratigraphic drilling.

Any suggestion that the law denies the Secretary the right, I think is without foundation and perhaps it will be litigated. But I think it is important for the Secretary to move on with the business of offering permits to those industries that feel that it would be helpful to have permits for onstructure stratigraphic drilling. Companies that do not feel that it is going to be any help, merely have to say, "We are not interested."

Thank you.

Thank you, Mr. Chairman.

Mr. Chairman, if I may make one point before moving on, I would only like to point out that not all members of the conference committee felt the Secretary of Interior had the legal authority

under the 1953 OCSLA to permit onstructure drilling as Mr. Hughes asserts.

In fact, in the opening day of debate on the onstructure drilling issue, Senator Henry M. Jackson, a longstanding proponent of onstructure drilling suggested a 5-point compromise which would have entailed reverting to the original 1953 OCSLA language in subsection 11(a), stating that, "I do not know what the [present] law is on it." [See transcript of June 22, 1978, Ad Hoc Select Committee on Outer Continental Shelf and U.S. Senate Committee on Energy and Natural Resources, conference on S. 9, p. 23.]

We believe that Senator Jackson's statement was an accurate assessment of where the conference committee stood with respect to the legal authority of the Secretary of the Interior to permit onstructure drilling for oil and gas. Clearly, for every member such as Congressman Hughes who asserted that such a right existed, another member was convinced otherwise. Thus the compromise was struck to revert to the original 1953 language on this point, and the expectation on all sides was that a court would be the final arbitrator of the correct interpretation. I would like the record to show that: (1) We in industry, do not believe the Secretary has the legal authority to conduct an onstructure, permit drilling program, and (2) such a program would not, in any event, achieve what its proponents claim and would not be in the best national interest.

The CHAIRMAN. Mr. Lewis?

Mr. LEWIS. Thank you, Mr. Chairman.

Mr. Kelly, I had questions that were similar to those just asked regarding onstructure. But did I hear you clearly in response on your view of the way the law reads at this point; is it your feeling that if the Secretary goes forward that his action is going to lead to litigation on the part of industry to test whether the Secretary has that authority?

Mr. KELLY. I think that is certainly possible, Mr. Lewis. I have no information that anyone has made a decision to do that.

But I think there is sufficient concern about the issue that it is possible.

Mr. LEWIS. Moving on, then, I assume that we are and you are interested in accelerating production, and that the dialog about these lease schedules, DOE, DOI, is one of measuring which schedule moves us in that direction more efficiently.

DOI's schedule appears to be less enthusiastic about accelerating production, for it has in its schedule offered lease sales from the Gulf of Mexico that have been offered on at least two other occasions and have been turned down; DOI has held back proposed leases, or moved back in its schedule high potential lease areas in Alaska, for example.

Would you spend a moment speculating with us as to the why of that deferred schedule, and the why of rescheduling lease areas of low potential early on?

Mr. KELLY. I think that generally speaking, the Interior Department is concerned about balancing offshore oil and gas production in the country with the need to provide adequate environmental protection.

I think that perhaps, in terms of establishing the 5-year leasing program, that environmental concerns have probably had a great

influence on the timing of some of these most prospective areas, particularly with respect to Alaska.

I think that there may be some reluctance to move on Alaska too soon, because they feel that there are environmental risks there, and also perhaps, they are concerned about getting involved in controversy in the lease-sale process and potential litigation and differences of opinion with various interest groups.

When you lease in the good old Gulf of Mexico, no one objects, and it is a pretty simple procedure to follow. But that is not necessarily in the best interest. And I think that our position is that particularly when you consider the second environmental impact statement that this committee provided in the offshore leasing process, where, once discoveries are made, we will get another look from an environmental standpoint, we can pause and study environmental consequences prior to the time that any production takes place. I think that that should give everyone some comfort.

And, as far as I am concerned, it eliminates any reason to hold up a lease sale. You can go forward, have the lease sale, and have exploration take place. Exploration is the lowest risk phase of offshore development.

Why not go ahead and hold these lease sales and conduct exploratory operations, and if discoveries are made, and we are getting ready to commence production, we can take another look at the environmental consequences.

So we would feel that Interior has been a little too reserved and ought to be more aggressive in the leasing program. They can be more aggressive without a great deal of environmental risk.

Mr. LEWIS. Assuming that we want to be a little more aggressive and move ahead with these things, let me ask one other question relative to due diligence.

You suggest that due diligence ought to be applied on a case-by-case basis, and if you have some general standard, that it could tend to discourage people, or smaller companies particularly, from participating, if their future right to bid might be cut off.

But you do not seem to rifle in on a specific way—at least, for me—whereby industry would be making recommendations other than just case by case, which could lead to nothingness or overregulation, on how we promote one of the fundamental purposes of due diligence. That is, if someone bids on a lease and is successful, we want to see them moving on that lease as soon as possible. And there is a tendency, it is believed by some, for unnecessary holding of those leases, and thereby, their potential.

It seems to me we ought to have a needle out there of some kind to make sure that people are not just inventorying these territories. And it has to be more than just case by case, at least from a legislative standpoint, if we are going to have some reasonable handle on oversight of that which the Department might be doing.

Mr. KELLY. I can appreciate your concern. I think you should take some comfort in the fact that as we move ahead into frontier areas, and as you take into consideration the fact that available offshore lands in this country do not have an undefined end to them in terms of their availability, that there is going to be a good

deal of incentive to move ahead with exploration just by the high investment that is going to have to be put into those properties.

So I think you should take some comfort from that. There is going to be enough money out there. It is costing the operators in terms of interest expense if there is going to be a built-in incentive to get on with exploration.

I think other than that, through the exploration plan process, that there is going to be communication between the Secretary and the companies, on a continuing basis, and I think that there is opportunity there for him to apply pressure to them without developing some unreasonable standards of due diligence.

We are just asking that he not be too rigid about it. I think the due diligence concept is there, and I think that we are really not challenging the concept itself. We are just challenging how it is applied. And we are just asking that no one be too rigid and inflexible when it comes to determining what constitutes due diligence on a leaseholder.

Mr. LEWIS. Thank you, Mr. Chairman.

The CHAIRMAN. Mr. Lott?

Mr. LOTT. Just one question, if I might. Mr. Kelly, in the legislation last year, the Gulf of Mexico, was grandfathered on the OCS amendments in various provisions. And I understand that through their proposed regulations, that DOE is ignoring this. Would you care to comment on that specific feature?

Mr. KELLY. Yes, Mr. Lott. I did not cover this in my prepared testimony, but as I recall, we did submit some comments to DOI on this. As I recall, the regulations require that before any development and production activities may be commenced, in any area of the OCS including the western Gulf of Mexico, a development and production plan must be submitted and approved. We believe that Congress specifically exempted this area from a development and production plan requirement when it stated, in section 25(a)(1) of the conference report that, "Prior to development and production pursuant to an oil or gas lease * * * in any area of the Outer Continental Shelf, other than the Gulf of Mexico * * * the lessee shall submit a development and production plan." The statement of managers made it perfectly clear that this exemption was granted in recognition of the long history of such development and production in the gulf area. To require a lessee in western Gulf of Mexico to file a development and production plan before proceeding with that phase of OCS activity is, in our view, time consuming and counterproductive to the best interest of the Nation.

Mr. LOTT. And that would specifically affect your company, probably, wouldn't it?

Mr. KELLY. Yes, sir, it would.

Mr. LOTT. That is all, Mr. Chairman.

The CHAIRMAN. Mr. Emery?

Mr. EMERY. No questions, Mr. Chairman.

The CHAIRMAN. Counsel has a question.

Mr. O'BRIEN. Mr. Kelly, your reference to the marine sanctuaries provision coming out of the Commerce Department is an interesting one. I want to make certain that your statement is accurate.

Is it your understanding that the proposal coming out of the office of Coastal Zone Management indicates that after the designa-

tion, future lease sales would be subject to a 5-year moratorium? I mean, a company would bid even though it were in a sanctuary or near a sanctuary, but you could not explore or drill for 5 years?

Mr. KELLY. Just 1 second.

[Conferring with colleagues.]

Mr. KELLY. The reason that I hesitated to answer your question was that as I understand it, the Flower Garden Sanctuary would call for a 5-year moratorium on oil and gas development, but the point I am not certain about is whether a lease sale would be permitted to go forward, and then there would be a moratorium on drilling activities. And I am not certain at that point.

I cannot answer it at this time, but would be glad to do so supplementally.

Mr. O'BRIEN. Yes, if you would submit that for the record, although I assume the Commerce Department will be asked to come and testify soon.

[The following was received for the record:]

SUPPLEMENTAL RESPONSE FOR THE RECORD

Mr. Chairman, the proposed rules for the Flower Garden Banks Marine Sanctuary apparently establish a three-pronged approach to the regulation of oil and gas operations within the designated area.

In the Federal Register of April 13, 1979, (44 F.R. 22081), the National Oceanic and Atmospheric Administration indicated that it will prohibit the "exploration for or exploitation of hydrocarbons" within the 85 mile isobath. (See proposed sec. 934.7(a), 44 F.R. 22081, 22081.)

Outside of this area, but still within the sanctuary boundaries, "hydrocarbon exploration and exploitation pursuant to any lease executed prior to the effective date of these regulations is allowed subject to all prohibitions, restrictions and conditions imposed by applicable regulations permits, licenses or other authorizations" and further subject to:

(1) A requirement that all cuttings and adherent drilling mud be shunted to within 6 meters of the bottom;

(2) A flat prohibition against bulk discharges of drilling muds;

(3) A flat prohibition against the simultaneous discharge of effluents from more than one well from a single rig or platform; and

(4) The requirement that drill cuttings and effluents be frequently monitored "in accordance with the specific requirements set forth in the permits issued by the Environmental Protection Agency pursuant to section 402 of the Federal Water Pollution Control Act" (i.e., the so-called NPDES permits). (See proposed sec. 934.7(b), 44 F.R. 22801, 22804.)

Finally, proposed sec. 934.7(c) states simply that "hydrocarbon exploration and exploitation activities pursuant to leases executed on or after the effective date of the regulations are prohibited anywhere in the Sanctuary for a period of five years from such effective date" (i.e., the effective date of the regulations).

It is this last proposal that causes us the most serious concern. The first issue is of course to ascertain whether or not the above quoted language prohibits all OCS activities, including lease sales, or whether it merely prohibits a lessee from engaging in any activities pursuant to a validly issued lease until the end of the five year prohibition.

Our conversations with various Department of Interior and National Oceanic and Atmospheric Administration personnel have yielded a variety of interpretations on this issue, perhaps, the most accurate statement being that "it isn't really clear at this point." We would note, however, that appendix C of the proposed regulations states that there will be a "five-year moratorium on operations on unsold leases and future leasing within 4 nautical miles of the 100 meter isobath[s]" (44 F.R. 22081, 22088).

I would reiterate, however, that the main point we wish to make is not that NOAA writes unclear regulations; rather, the point is that various parties, philosophically opposed to the idea of OCS oil and gas operations, are continuing to throw up new and different procedural roadblocks to such operation at a point and time when this Committee, the Congress, and the American public are demanding industry to increase the domestic production of hydrocarbon resources.

We do not believe that this Committee and the Congress took five years to rewrite the OCSLA, considering and balancing the need to protect the environment with the desire for increased hydrocarbon recovery, so that future efforts directed toward such recovery could be thwarted by the untimely and overly burdensome imposition of new requirements.

As I said in my statement, we believe that the approach being followed by the U.S. Office of Coastal Zone Management in implementing the Marine Sanctuary Act is inconsistent with the policy of Congress as expressed in last year's OCS Amendments and we hope that this Committee will have time to carefully explore the interrelationship of these two Federal Statutes to ensure that delays are kept to a minimum.

Mr. KELLY. All right, good. But one point I would like to make generally is that I know this committee and the Congress in general felt that the adoption of the 1978 amendments would speed up the OCS process and would eliminate a lot of the existing environmental litigation.

But it has been our experience since the adoption of the amendments that this is not going to be the case. And I think the prime example of this is the Georges Bank lease sale, which still has not been held in Massachusetts. Here, we have a case where the plaintiffs appear to be attempting to use the Marine Sanctuaries Act, as well as the Fishery Conservation and Management Act, as further devices to delay lease sales, rather than taking the position that the Secretary of the Interior has the responsibility of balancing the OCS Land Act amendments with those other statutes, they are actually trying to point out conflicts and actually use them to hold up the sales from going forward.

Mr. O'BRIEN. Thank you, Mr. Kelly.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you.

The next witnesses will be an environmental panel, Ms. Frances Beinecke, project staff, Natural Resources Defense Council, and Ms. Hope Robertson, staff, Environmental Policy Center.

Ms. Beinecke?

STATEMENT OF AN ENVIRONMENTAL PANEL CONSISTING OF FRANCES BEINECKE, PROJECT STAFF, NATURAL RESOURCES DEFENSE COUNCIL, AND HOPE ROBERTSON, STAFF, ENVIRONMENTAL POLICY CENTER

Ms. BEINECKE. Thank you, Mr. Chairman.

The Natural Resources Defense Council appreciates the opportunity to appear before this committee to present testimony on President Carter's proposal to add additional acreage to the recently proposed 5-year leasing program.

NRDC is a national environmental organization with over 40,000 members, which has been deeply involved in the OCS leasing program for many years. We strongly supported the much needed amendments to the Outer Continental Shelf Lands Act and have closely monitored the implementation of that act since it passed last September.

We have submitted comments to the Interior Department on almost every proposed regulation and notice of intent to issue regulations which they have come out with so far.

We believe that the Interior Department's response to the President's message must be consistent with the purposes and requirements of these amendments. The amendments, which do reflect the

critical energy needs of this country, respond to the public's grave concern about the effects of OCS oil and gas operations on the marine and coastal environments and the long term viability of the resources which inhabit and depend on them.

It is imperative that the essential environmental requirements of the amendments are fully and completely addressed in whatever leasing program the Secretary proposes. All of these considerations are just as valid today as they were last September.

The environmental provisions of the amendments are of great importance. Concerns about continued productivity of the offshore environment are still very much with us. Just last week, the commercial fishermen of New England nominated the Georges Bank as a marine sanctuary, indicating their continued concern about the impact of offshore oil and gas operations on that fishery. The fisheries of the OCS are and will continue to be an essential food source for this country.

I would like to review with you NRDC's comments on the 5-year leasing program which the Secretary of Interior proposed in March of this year, and I would like to submit our more detailed comments on that program into the record.

First we believe that it represents a very accelerated program, particularly in frontier areas. As our comments indicate, we are concerned that the proposed program, which is essentially a schedule, does not discuss how the considerations of section 18 on marine productivity, environmental sensitivity, competing uses, and the availability of predictive information were addressed in the development of the program.

The same concern was expressed at the recent OCS advisory board meeting by representatives from many of the States adjacent to frontier areas.

Our comments also expressed strong support for the Secretary's decision not to include the Bristol Basin in this 5-year schedule. We believe that this decision accurately reflects the Governor of Alaska's request to postpone a sale there indefinitely. This area is known to be one of the most productive marine areas in the world, as indicated in the Interior's program document on the 5-year leasing program.

The decision to delay sales in St. George Basin and the Chukchi Sea reflect the need for comprehensive planning. The information needs on the sensitivity and productivity of these areas require a thorough analysis before they can be considered for inclusion into a schedule.

It may become apparent that they should not be included because the long term viability of the renewable resources greatly surpasses the very short term gain of using up limited nonrenewable hydrocarbon reserves.

The Secretary's foresight to omit the areas of great environmental concern will help to avoid future conflicts similar to that which still exist over lease sale 42 on the Georges Bank.

The President's energy message directs the Secretary of Interior to propose additional acreage to that in the new leasing schedule. Adding acreage is not the same as adding additional areas to the schedule, which seems to be the interpretation of the industry and the Interior Department.

In responding to this directive, the Department must meet the complete statutory requirements of the amendments, including all the environmental considerations of section 18, as well as those in the National Environmental Policy Act.

The environmental community will carefully review the proposed program to insure that these statutory requirements are met.

We look to this committee, in carrying out its oversight responsibility of the OCS Lands Act amendments, to insure that all the requirements of law are fully met.

Thank you for the opportunity to present our views.

The CHAIRMAN. Ms. Robertson.

Ms. ROBERTSON. Thank you, Mr. Chairman, and members of the committee. I would like to thank you for inviting the Environmental Policy Center to testify about the President's recent statements regarding accelerated leasing on the Outer Continental Shelf.

In the President's recent energy message, he requested that the Secretary of the Interior propose additional acreage in the new leasing schedule. In light of the fact that the President's statements occurred after the Secretary had already released his proposed 5-year leasing program, we are very concerned about the changes which will be made in the proposed schedule in order to comply with the President's request.

Obviously, there will be many different views on how the Secretary could meet the mandate to accelerate OCS leasing. You have already heard many of the views of industry on the subject, and as you can probably guess, as a representative of the environmental community, the views I will offer will vary somewhat from industry's.

Being the committee responsible for the House of Representatives work on this law, you clearly play a major role in insuring that the intent of the law is complied with.

Having listened to the hearing last week, I am very concerned that many of the important purposes of the new OCS law are being overlooked by some of the members of this committee.

I know that Chairman Murphy and other members of the committee recognized and supported the need to reform the OCS law so that consideration was given to important factors other than the need for oil and gas, in our leasing program. It is precisely these other values that I hear some people challenging, even before the new law has had a chance to work.

There was a great deal of thought and effort put into the development of the 5-year leasing program proposed by Secretary Andrus.

Although we may have some differences with the Secretary about that program, basically I support the program which he laid out.

It offers more acreage yet takes into consideration the need to hold off sales in the most sensitive areas until more is known about them.

As we have already stated to the Secretary, we commend the Department of Interior for their initial efforts on the 5-year leasing program.

The question before the Government now, and the subject of this hearing, is how will the Department of the Interior respond to the President's request.

I would like to make three recommendations.

First, any efforts to increase the amount of acreage offered under the leasing program must comply with the requirements of the act—

The CHAIRMAN. Ms. Robertson, we have a vote on, and it is on the Bennett amendment, increasing the defense function by \$1.7 billion and \$59 million in outlays.

We are going to recess for about 7 minutes and come back.
[Short recess.]

The CHAIRMAN. The committee will come to order.

Miss Robertson, you may continue.

Ms. ROBERTSON. I will start with my recommendations again.

First of all, any efforts to increase the amount of acreage offered under the leasing program must comply with the requirements of the act. This involves consideration of all the factors contained in section 18 of the act, such as the interest of the potential oil and gas producers in the area, the relative environmental sensitivity of an area, and the location of such regions with respect to the energy needs of regional and national energy markets.

Second, accelerated leasing does not mean that there has to be sales in more areas, as the industry would like. This is a particularly important consideration in our view. We are not opposed to greater leasing, provided that it will not result in premature development of areas.

Alaska is one of the areas of greatest concern due to the lack of information currently available on the marine resources. Until there is more knowledge about the marine resources in the Alaskan Outer Continental Shelf, it will be difficult to judge what the potential impacts could be and how to alleviate them.

For this reason, we hope that the Department of Interior does not change any of its current plans to develop these areas cautiously. If there is a need to accelerate oil and gas production on the Outer Continental Shelf, we would prefer to see it directed to areas where available information allows development to occur with minimum impact on other resources.

An additional factor to be remembered with regard to moving into the frontier areas in Alaska is one well recognized by the industry. Oil and gas development in some of the areas will be very difficult due to the physical constraints on activities. New technology to deal with ice and other conditions, for example, needs to be developed. I believe one of the previous speakers referred to that.

As a result, actual production will take longer in some of these areas than it will, for example, in the gulf. If the intent of this Presidential request is to bring more oil and gas online as soon as possible, opening up Alaskan frontier areas immediately will not accomplish this goal as well as other areas might in the short term. Development of the Alaskan Outer Continental Shelf will ultimately occur, but we would rather see it occur at a time when industry has the technological capabilities to minimize any risks to the environment and life and property.

Third, before Secretary Andrus is pushed into accelerated leasing by other members of the administration and the Congress, it is important that this committee and others step back and examine the context within which the President's recommendation was made.

In the face of impending gasoline shortages and other major problems in our domestic petroleum supply picture, it sounds logical and publicly appealing to increase domestic production. But as this committee knows, future OCS development is not a solution to our short-term problems, such as gas lines in California or even in Washington. OCS development is a long-term proposition which, if we're lucky, will supply part of our oil and gas needs over an extended period of time.

It is critical at this juncture that we not rush into accelerated leasing under our current crisis mentality without insuring that such a policy will, in fact, achieve our objectives.

Some oil companies and some members of this committee have already grabbed the President's statements as an opportunity to pressure Secretary Andrus into taking steps he has already indicated are not wise to take at this time. The best example of such pressure is the unfair comparisons which have been made between the Department of Energy's leasing program versus the Department of Interior's. Reducing a comparison of the two proposals to five versus seven sales per year overlooks some of the important details in each of these recommendations. I suggest that before some of the members of this committee continue to attack the Department for being against OCS leasing, based on the comparison of the number five versus seven, that they sit down with the authors of both schedules and hear what the real differences are. From what I have been able to learn from both Departments, the differences are minor.

For example, I believe Mr. Lewis referred to areas in the gulf being offered by the Department of Interior which had already been offered and rejected. I might say that in conversations I have had with people in the Department of Interior, that nowhere in the proposed 5-year leasing schedule has there been any reference to what tracts will be offered. I suspect that if you call up anyone in the Department of Interior they will answer that. I don't know where you got your information, but there has never been any specificity in the 5-year leasing program as to exactly what tracts they are going to offer. They simply refer to regions. That is one example of comparisons that I think has no basis. As I said, from what I have been able to learn from both Departments, the differences in the two schedules are very minor.

Whatever the magic number of sales might be, the bottom line is how much acreage we can get into actual production. For example, one of the previous industry speakers said that eight would be the right number of sales. Well, eight what? How many acres are they talking about? They could be eight very small sales, eight large sales, et cetera. Before people choose a number out of the air, I think there has to be a lot more detail as to exactly what they mean by the numbers.

There is no point in offering a huge number of tracts for sale if industry and/or the Department cannot handle them.

Frankly, I find there is an interesting contradiction in the testimony of the industry representative. They all want to see more acreage offered, and they say there are no constraints, no problem with manpower, capital, equipment, et cetera. Yet then they turn around and attack things like the due diligence requirement saying, for example, that—as the previous speaker said—that if they lease an area, they don't want to develop all the tracts simultaneously because they want to hold off and wait and see what happens in some of these areas.

If that's the case, then perhaps it's better not to sell so many tracts at once. We should hold more sales and smaller sales so that we'll know more about the areas before we lease them.

The requirements of this act and the regulations which are being promulgated under it provide a framework for making sound decisions about the level of leasing which will meet our energy needs, and they will insure there is adequate protection of the environment and maximize the benefits to the public. As this committee recognizes the need to meet these objectives, I urge you to encourage the Secretary of Interior to continue his efforts to develop a leasing program which insures a balancing of these different objectives.

I would like to make several other comments in response to one of the previous speakers. There was a comment that small companies have a great deal of difficulty in participating in OCS activities. As you know, the Environmental Policy Center has always been a strong supporter of encouraging as many companies as possible to participate in the OCS program. However, I find it very amusing that they say they have difficulty participating because of the requirements of the new act. And one of the examples they used was they don't have the personnel or the money, et cetera, to follow all the notices that come out in the Federal Register.

I would like to add that I have no staff, and I have a very minor budget relative to most small oil companies. Yet I manage to read the Federal Register and find out what regulations are coming out, so I find it hard to believe that these small companies don't have the personnel to do this, and that this is an onerous responsibility.

I also don't have the luxury of having four people sitting behind me to answer questions from the members of this committee. So I don't think the accusations made by the representative of the small companies really has much basis in fact.

The CHAIRMAN. Miss Robertson, did you go to Yale?

Ms. ROBERTSON. No, I did not. I went to Harvard.

The CHAIRMAN. That's probably the reason you don't need four people sitting behind you.

Ms. ROBERTSON. Thank you very much.

The CHAIRMAN. Miss Beinecke, if you were setting priorities for Federal leasing, where would you prefer to see that development on the OCS? In the Alaska area, in the gulf, on the east coast, in California, just where?

Ms. BEINECKE. Well, I wouldn't like to answer that in terms of areas. What we would like to see is to have the studies, which the Department of Interior and the adjacent State think are necessary, completed prior to offering the areas up for lease. That is certainly the issue in Alaska, where the Governor of Alaska, in response to

the Secretary's request for comments prior to the issuance of the proposed leasing program, identified areas where he thought additional studies were necessary before those areas could be put on the schedule. So we would like to see those studies completed. Our position on each area would depend on the results of those studies.

I think in the gulf, people have been there for a long time and there have been quite a number of studies done in that area. Also, off the mid-Atlantic, there are many more studies completed to date than there have been in many of the sensitive areas of Alaska.

The CHAIRMAN. Miss Robertson?

Ms. ROBERTSON. I would concur with what she said.

The CHAIRMAN. You know, the gulf is a pretty safe bet. If you want people to bid, you just go where the experience factor is. I think that's what we're almost getting from gulf sales. The historical lessons of the past 20 years indicate the probability is on your side.

But the problem is to get oil and gas and to get it quickly. We have built in to these OCS amendments the flexibility to explore. We require baseline studies. And then, if there still is any problem or impact on the environment, we have the ability to prevent exploration if that's necessary.

It seems that many of our experts tell us the Alaskan areas are the frontier areas where the most probable large reserves will be discovered.

Ms. BEINECKE. Isn't it true that although those areas may have the largest potential, so did the Baltimore Canyon. Everyone thought it had a lot of potential—it might still, but we haven't found it yet. But if the Alaskan areas do have a lot of potential, they will still be available once the studies have been completed. I can't imagine that if by 1985 those areas haven't been leased, that we won't have the same magnitude of petroleum supply problem that we have now.

So, looking in not even a very long term way, we think that you must do what people, particularly the Governor of the State of Alaska, believes is necessary prior to offering those areas for lease. We will still need the oil in the late part of the 1980's, if he believes it is adequate to go ahead at that time.

The CHAIRMAN. Mr. Forsythe?

Mr. FORSYTHE. No questions at this point, Mr. Chairman.

The CHAIRMAN. Mr. Emery.

Mr. EMERY. With respect to leasing in frontier areas such as Alaska, where there obviously are some very critical environmental questions that have to be answered, do you feel that the best approach is to lease a few tracts in relatively safe areas, or do you think the best approach is to lease smaller tracts and a greater number of them spread around where the greatest oil and gas potential appears to be?

The reason I ask the question is because, as you know, there have been a number of different approaches that have been taken. One is to concentrate in one particular area where you think you know something and do a lot of drilling, drill a lot of holes and see what's there. The other approach that is used in some cases is to

scatter a variety of tests, to give you a better idea of a larger geographical area.

Both techniques have worked. I tend to like the idea of spreading around and sampling a variety of areas within a certain geographic section.

Do you see any particular environmental risks with either one, and if you do, what are they and what do you think would be in the best interests of the Bristol Basin, the Beaufort Sea, Cook Inlet, or some of the other areas where oil and gas potential exists in Alaska?

MS. ROBERTSON. I would have to think about it for awhile as far as what the relative environmental risk would be of each option. The Alaskan Outer Continental Shelf is so vast, it's going to take us an enormous amount of time to finally figure out exactly what is out there, both in terms of oil and gas and also to figure out what other resources are really available there.

My own feelings on the whole subject of expediting exploration and production in Alaska is also tainted by the following. Right now we have 1.2 million barrels of oil coming down the North Slope and there is some difficulty processing all of that oil so that it can be used on the west coast. My own preference is, what is the purpose of increasing production immediately in Alaska until we have the necessary infrastructure within the lower 48 States. We need to retrofit refineries and improve our transportation system from the west coast inland. If we're trying to answer our short term—let's say for the next 5 years, we should be pushing into areas where we know we have oil, such as the gulf, where we have the necessary infrastructure to handle that oil—the refineries in the gulf I'm referring to—and where it could really do us some good. You could back our imported oil in the gulf refineries. Wait until we build the kind of infrastructure that we need on the west coast before we rush into increased production on the Alaskan Outer Continental Shelf.

MR. EMERY. Of course the difficulty with that is that there have been a variety of restrictions in the State of California and other places against either storage facilities, pipelines, or high sulfur oil refineries. So unless we can get some kind of coordinated effort, which doesn't, of course, directly relate to OCS itself, we are always going to be up against that problem—delay in exploration of drilling in Alaska, because we don't have the facilities in the lower 48. But if we don't have the facilities in the lower 48, we can't refine the oil once we get it.

MS. ROBERTSON. I think everyone pretty much agrees that there is a need to completely revamp our Federal refinery policy. It is absolutely unreasonable.

MR. EMERY. Has your organization explored the various alternatives to doing that? Usually environmental groups have been opposed to oil refineries, and I think it is necessary for environmental groups to realize that the oil and gas has to be developed.

I'm coming from a little different angle, because I haven't always been in favor of oil refineries in my own State. You know, there are a lot of environmental reasons why a particular facility in a particular place isn't a good idea.

All I'm saying is, we ought to take a look at both of those two options, one, the necessity for finding out where the oil and gas reserves are, and second, coordinating that with a plan to build facilities in the safest manner possible, to get them on line as soon as possible, so that we'll be able to handle that resource.

Ms. ROBERTSON. First of all, you asked whether our organization was looking at anything to do with refinery policies. We have testified for a number of years that we felt refinery policies should be changed. We are a national organization—and granted, there are local environmental groups that oppose having a refinery in their backyard, and in some cases they are entirely justified.

My own preference is, I would much sooner see a new, large refinery built, if properly sited, than continuing the operation of the smaller "rust buckets" that we currently are favoring, due to policies such as the small refiners bias, et cetera. That is our policy.

In response to what you just said, I still think there are a lot of changes that need to be made on the west coast and other areas to handle Alaskan production. In light of the fact that that's going to take a couple of years to do, I think it's very wise for the Secretary of Interior to continue just what he's doing right now, to hold off sales in the most sensitive areas until he collects the environmental information that is necessary. I don't think that is going to result in a reduction of oil and gas production. Those areas, I am sure at some point, will get into production. But there is no need to rush into it right now when we can turn to other sections of the Outer Continental Shelf, where we have more environmental information.

Mr. EMERY. Of course the difficult problem there is that when you unduly delay exploration, you are just putting off the day when you will be able to put finds into production. And certainly from an environmental standpoint, you actually agree there is a difference between exploratory operations, which primarily determine where the resource is, what quality the resource is, and what other difficulties there may be in getting it out of the ground, versus actually going into production which has its own set of environmental dangers, which we certainly do need study.

You know, one of my great difficulties with the Alaska lands bill, which really doesn't relate to this, at the present time, is that neither the environmental bill nor the not-so-environmental bill really addresses that question of how do you determine what the resources is before you move into production.

Now, I just think we have to start thinking about this maybe in two different ways: Having an environmental assessment to determine what the environmental concerns are—and that's proper, regardless of whether you're talking about fish or caribou—but also, taking a look at the next step down the road and start planning for when those resources need to be brought online. And if we agree the resource is there and it's going to be brought online, isn't it better to have some planning done early enough on, both so you will know what you handle if you get into a crisis, but also so that you can plan for all the eventualities before the need is right on your doorstep.

That's why I think we should not delay the exploratory operation to any great extent, to get about the business of doing all the environmental assessments, and then move into our structures, drilling or whatever alternative there might be in certain areas within a certain area, just so we'll know where we are.

Ms. ROBERTSON. But I think you would be the first one to admit that if, for example, they moved into the Chukchi Sea or Saint George Basis immediately and started exploration, and say there were major show of hydrocarbon as a result of some of the early exploratory drilling; the pressure to develop that area would be enormous. This pressure would occur regardless of whatever environmental information came out, even if it turned out that the area was one of the prime fish habitats or marine mammal habitat. That is why I think it's critical that we find out what the nature of the marine resources are before we move in at all.

I'm not saying you should never develop these areas, but I would rather know what's there as far as other resources, and also give a few years leadtime for the necessary technology to drill in those waters, where there are more hazardous conditions. As soon as you move in with exploration and say, "Well, after the fact, we're going to come out with the environmental information," there will only be a token effort to protect the environment.

Mr. EMERY. I guess my feeling, especially in the George's Bank and that area, which is very close to my heart, is the importance to determine promptly in advance of drilling where your breeding grounds are and where the most sensitive environmental concerns are actually located, and concentrate on determining the effects of any exploration or drilling operations on the ecology of that particular area.

But you are still up against the problem, that if you know there is a high potential for an important oil and gas resource in an area that is potentially in conflict with some other aspect of the environment, you still have to face the reality that some day, when we're up against a critical energy problem—and there's no guarantee we aren't going to face those from time to time, as we are now—someone is going to go in there and rape the hell out of the area and really do a lot of damage if that proper planning isn't already accomplished.

All I'm saying is, I think in the long run it's better to know what's there, than assume if you don't know what's there people will leave it alone. I just don't think that washes. I don't think it washes offshore any more than it does on land in the North Slope area.

Ms. ROBERTSON. We're not saying to leave them alone. We are saying go in and study the other marine resources there and plan ahead, so if and when exploration occurs, you can proceed and minimize any environmental risks.

Mr. EMERY. Don't you think the studies on those critical areas ought to be done first, because those——

Ms. ROBERTSON. That's what is being advocated by the Secretary, and if you look at his proposed 5-year leasing schedule, he has put the sales in the most sensitive areas way down on the bottom of the list. In fact, I believe they're the very last sales to be held.

So that in the years between now to 1985, they can go in and do all the baseline studies and have everything completed. Then they can at that point hold the lease sale and begin exploration.

Mr. EMERY. I guess my concern is—and this will be my final comment—my concern is that we shouldn't put all of these locations so far down on the list that a proper assessment is never done because you never get to it. Because there is always going to be the question of what do you do when you're up against a real problem. Do you set all these studies aside that haven't been done yet, or do you just continue putting off today when you get the information that you need.

All I'm saying is, I think we ought to get about studying those areas and study them not last, but first, so we will have the most information and have the most opportunity to give them a start for the best protection. That's the only point I wanted to make. I think we're in substantial agreement on most of those points. But I just think it's important that some of these things be given some priority, rather than put off further down the list.

Ms. ROBERTSON. I agree completely that these areas should be given priority for environmental studies, and depending on what happens at the next election, and if Secretary Andrus is still around in 1983 or 1984, I know he will hold to his word on everything he has promised with regard to the new 5-year leasing schedule. He has held every sale on time under our current schedule, except for those sales that were held up for reasons beyond his control. And if he says he's going to do environmental studies in those areas, I have no doubt in my mind that environmental studies will be completed on schedule and that the lease sale will occur on schedule.

Mr. EMERY. Well, I hope that, in fact, is the case. We have seen some delays that have seemed to be at odds with the policy that this committee has tried to establish. But if the Secretary will, in fact, stick to a time table that we all can agree with, and do all the studies on time without unduly biasing the research and development process, then I think we'll all be satisfied.

Ms. ROBERTSON. To my knowledge, there has not been one delay yet in a lease sale under Secretary Andrus. Absolutely none. Even since the passage of the act, every single sale has been held on time and, as far as I know, every sale scheduled in the next year or so will be held as it was scheduled in 1977, when the 5-year leasing schedule came out. So I don't know what delays you're specifically referring to, but in terms of getting tracts into actual production, there have been no delays.

Mr. EMERY. Thank you, Mr. Chairman.

The CHAIRMAN. Mr. Miller.

Mr. MILLER. No questions.

The CHAIRMAN. Mr. Lewis?

Excuse me. Mr. Lott?

Mr. LOTT. No questions.

The CHAIRMAN. Mr. Lewis.

Mr. LEWIS. Mr. Chairman, not to take too much more time, we have had 20 years or so in the gulf experience with exploration and production.

I assume from your testimony that just all kinds of study has been done relative to the positive and/or negative impacts upon marine life in the gulf as a result of that activity. Can you describe that very briefly to me and maybe give me some reference to sources from experts in that whole area of marine life and the ecosystem?

Ms. BEINECKE. There has been quite a number of studies done by GURC, which is the Gulf Universities Research Consortium, and the Interior Department has also done, or at least reviewed the literature on studies. I guess the source that puts a lot of that information in a concise form is the draft environmental impact statements in the gulf area. That is probably the best reference to get a quick and easy picture of the research that has been done so far.

Mr. LEWIS. Is in large part what you have learned from your review of that material what causes your concern for the impact of exploration and eventual production on marine life in areas like Alaska?

Are you basing that argument and concern on experience and the net result of production and exploration elsewhere?

Ms. BEINECKE. I would say so. There have been a lot of studies done, particularly a study recently done by the Woods Hole Marine Biological Laboratory, which assessed the damage of oil on a tide flat area in Massachusetts. There have been a number of studies done on the aggressive oil and gas development in the North Sea off of Scotland, and a number of studies on the environment and socioeconomic environment of adjacent areas.

But I think that one of our problems is that the environment of the Gulf of Mexico is radically different from the environment in many other areas. The Georges Bank has a very distinct ecosystem which isn't in any way, I think, comparable to the mid-Atlantic or off of California or the gulf. The condition of marine life very much depends on specific parameters in the environment such as temperature, circulation, many different things. It's very difficult to take literature from one area and use it as an indicator of another area. Areas have to be studied very distinctly, and that's what we have been trying to get out of the environmental studies program over the past couple of years. We just think that comparisons are very difficult to make.

Mr. LEWIS. Nevertheless, that history and that background is so important if we're going to work with some fundamental assumptions. I have a very intense concern about maintaining that balance of marine life, extending its potential for other resources that may be more important than oil, and that is whether people eat or not.

Are you proposing that this committee or some other committee come up with money to advance studies in these sensitive areas at this point in time, rather than just waiting on the promise of the Secretary?

Ms. BEINECKE. No. Actually, there is an environmental studies program that is on the books which is funded in the range of \$50 million a year, and these studies I think are on schedule. As Hope indicated, the difficulty is that studies take a long time, particularly studies on ecological conditions. You have to do it in many

seasons and over many years to really get an indication of trends, populations, different characteristics.

Mr. LEWIS. Would you suggest that maybe we ought to reorder the priorities in order to accelerate some of these studies?

Ms. BEINECKE. I have to say that I would have to look at Alaskan studies, which I would be happy to do. Most recently I have looked at those for the mid and North Atlantic. But I would be happy to do that and give some sense to whether we feel they should be reordered. Right at this moment I can't remember exactly what the scheduling is for the Alaska sales.

I think that the Bureau of Land Management, though, does feel they are very tightly funded to do the full scope of studies that they believe are necessary. I am sure that Frank Gegg from BLM would be happy to provide information on that.

Mr. LEWIS. I would be interested in that additional information. Thank you.

Thank you, Mr. Chairman.

The CHAIRMAN. Mr. Miller?

Mr. MILLER. In that regard, let me ask you something. In your statement you talk about obviously there are some resources which have already been leased in known areas that have not been developed yet, and is it fair to say that you're asking that we might place some emphasis on incentives, whatever they may be, to develop those areas before we just strike off out into the newer areas, that you may be able to buy yourself time given the total ability of the industry to drill and produce, that you can try to place emphasis on getting those lands into production where you know more about it, and you can still continue the simultaneous studies to determine what other areas you want to open up in an orderly fashion. That's my reading of your statement.

Ms. ROBERTSON. That's correct.

Mr. MILLER. That you don't just have to go out—that new is necessarily better. We know that in California less is better, but we don't know if new is better. We haven't determined that yet.

So we are not necessarily talking about decreasing the supplies that come from the OCS, in terms of crude oil, but it's a question of where you do it and what kind of process you do it in.

Ms. ROBERTSON. That is correct.

I would like to add another point I learned in a conversation that I had with some people in the Department of Interior last Friday, that reoffering acreage which had been offered in a previous sale, but not sold, generally, turned out to be very lucrative.

For example, looking at the gulf, certain tracts around a productive area have been offered but no one had bought the rights to develop in that area, when they reoffered them there was a much better return to the U.S. Treasury. I think those are the kind of areas that we could be looking at for the time being, to go into those areas where there has been already development, and let us buy some time, as you say, for the other areas where we know very little about in other resources.

Mr. MILLER. Thank you.

The CHAIRMAN. Mr. O'Brien?

Mr. O'BRIEN. We have had testimony which you alluded to comparing the Department of Energy proposal for the 5-year plan with

the Department of Interior's, and you described the conversations which you have had with people within the administration.

Could you give us your view, your comparison, if you will, of the two proposals, and suggest where and how they differ?

Ms. ROBERTSON. Yes. There were references earlier to the fact that the Department of Energy oil and gas production levels, were much higher than those that would be obtained under the Department of Interior's leasing program.

I started doing some research on what those production levels were based upon. When the Department of Energy ran their models of how many lease sales they were offering and what production was expected, they based it on their acreage estimates. Their acreage was 600,000 acres for each sale in the gulf and Pacific areas, 800,000 acres for the Atlantic sales, and a million acres for the Alaska sales.

At that time, when they ran the model, they didn't have any idea of what the Department of Interior's acreage figures were, so they ran all the Department of Interior's sales using their own acreage estimates. Well, it turns out that those acreage estimates are not the same as those offered by the Department of Interior. So the production comparisons are immediately invalid, and the Department of Energy recognizes that now.

In fact, according to my conversations with some people at the Department of Energy, the chart that they included in their testimony last week is now being withdrawn as no longer being valid. If you read the study that the Department of Energy put out—I believe you know the one I'm referring to—it is Federal leasing and Outer Continental Shelf energy production goal, you will notice several problems.

One of the things they neglected to put in the study was the acreage figure. There are other minor oversights in any comparison such as the one Department of Interior pointed out—and I believe Heather Ross referred to this last week. The difference between seven versus five sales is not so great in terms of actual acreage offered. For example, the Department of Energy offered three sales in the gulf at 600,000 each, and the Department of Interior offers two sales at 1 million acres each. According to my multiplication, that means the Department of Interior is offering more acreage in the gulf than the Department of Energy is.

I would prefer to submit for the record some other detailed comparisons of the two studies. But that's why I have highly recommended, that you sit down with the people who wrote both the schedules and hear all the differences, because it turns out the differences are fairly minor.

There are other assumptions in DOE's schedule, such as assuming that the price of production remains constant, and their assumptions about the actual price received for the petroleum per barrel, that are questionable.

The other thing that the Department of Energy did not factor in is what BLM's capabilities were to handle seven sales a year.

So those are the kind of things that I had some question about, and in conversations with people it was quite evident that the Department of Energy had not done all their homework.

Mr. O'BRIEN. One of the questions that has been recurring, both in these hearings and in the process of actually writing the bill, have had to do with the question of suits, lawsuits. One of the criticisms that we have heard privately and on the record here have been that the programmatic environmental impact statement that the Department plans to prepare could possibly give cause for an undue delay and could precipitate lawsuits.

What's your view of those observations?

Ms. BEINECKE. I would like to say first of all that the Interior Department was thinking for awhile that maybe they didn't have to write one. Now, that certainly would have precipitated a lawsuit instantly, because that is just a violation of NEPA. They had no reason for not writing one, or why they weren't subject to writing one. So they have avoided a lawsuit right off the bat. It depends very much on what the substance of that statement is.

I was surprised when Mr. Kelly indicated that there were suits being planned. I don't think that any suits have been brought on the OCS leasing program since the passage of the amendments. We are certainly waiting to see how it's implemented. We have a lot of hope in the implementation of this law. If the environmental provisions aren't implemented in the way they are stated, or aggressively implemented in a timely way, I think you can be guaranteed that there will be some suits. I hope that that won't be the case.

Ms. ROBERTSON. It's all the more reason for this committee to push to make sure the environmental provisions are adequately addressed.

Mr. O'BRIEN. Have you taken a look at the proposal for windfall profits tax that the administration has proposed, with a sense to analyzing how that would affect Outer Continental Shelf development.

Ms. ROBERTSON. Yes.

Mr. O'BRIEN. What's your view on that?

Ms. ROBERTSON. I know you asked questions about this last week, and—

Mr. O'BRIEN. There's a sense among the industry people that it's going to provide a drag on capital accumulation, and possibly diminish incentives to invest offshore. Of course, there's a proposal that has been associated with Senator Long on the Senate side to institute a plowback provision which would enable the industry to get some sort of tax benefit if they guaranteed that they would reinvest in production.

So far, although it seems to have, to the staff at least, some significance, we haven't been able to elicit testimony one way or the other.

Ms. ROBERTSON. Well, I have two comments on that.

No. 1, the industry, as you have heard them say today and last week, indicated that capital is no constraint in offshore oil development, if there were a fixed number of sales offered. People said they have the personnel, they have the equipment, they have the capital, and they would be out there drilling if there were some assurance that they could actually move into these areas. And that's with or without the benefits of decontrol and the so-called windfall profits tax.

No. 2, I don't see that the industry could get a better incentive than they currently have to move into the Outer Continental Shelf. As you know, new oil and gas produced in the Outer Continental Shelf gets basically the world prices.

I frankly don't see the windfall profits tax will have any effect whatsoever on increasing OCS production. At least the industry has stated indirectly that it won't, because they said they have all the capital they need.

Mr. O'BRIEN. Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Miss Robertson and Miss Beinecke.

Our next witnesses will be a panel, Mr. Steve Lande, assistant special trade representative; Mr. John Lyons, general president, International Association of Bridge, Structural & Ornamental Iron Workers; and Mr. William Lawbaugh will accompany him. He is the legislative director. And Mr. Arthur Schiffin, branch chief, Manufacturers Classification Branch, U.S. Customs Service, will be here in place of Mr. Salvatore Caramagno.

Mr. Lande, if you would start off.

STATEMENT OF A PANEL CONSISTING STEVE LANDE, ASSISTANT SPECIAL TRADE REPRESENTATIVE; JOHN H. LYONS, GENERAL PRESIDENT, INTERNATIONAL ASSOCIATION OF BRIDGE, STRUCTURAL & ORNAMENTAL IRON WORKERS, ACCOMPANIED BY WILLIAM M. LAWBAUGH, LEGISLATIVE DIRECTOR; AND ARTHUR SCHIFFIN, BRANCH CHIEF, MANUFACTURERS CLASSIFICATION BRANCH, U.S. CUSTOMS SERVICE

Mr. LANDE. Thank you for inviting me here today to discuss the administration's views concerning the eligibility of offshore drilling platforms under the U.S. generalized system of preferences.

The regulations which govern the GSP are designed to assure the public a procedure where they can propose modification in the program. This is done through an annual product review where concerned parties can petition the interagency Trade Policy Staff Committee, the TPSC, to add or delete products from the GSP, or make other modifications as deemed worthy.

The regulations also provide for the acceptance of emergency petitions which may be accepted and reviewed at any time if circumstances so warrant.

In October 1978, the International Association of Bridge, Structural & Ornamental Iron Workers filed a GSP petition under the emergency procedures. This petition was to remove oil drilling platforms from the list of items eligible to receive GSP duty-free treatment. Public hearings were held on this case in January 1979; that is, on an emergency basis. After careful analysis of all background information, data and public testimony on the case, the TPSC recommended to the President that this item be removed from the GSP effective March 1, 1980. The decision was published in the Federal Register of March 2, 1979.

In reaching its recommendation that oil drilling platforms be removed from the list of articles eligible to receive GSP duty-free treatment, effective March 1, 1980, the TPSC took into consideration the fact that the production of oil drilling platforms is a long-term process.

As explained during the hearings, as much as 1½ years can elapse between the time a contract of an oil drilling platform is awarded and completion of a rig. Because the two contracts with Brown & Root (Labuan) had been awarded with the understanding that GSP duty-free treatment would be in effect, the TPSC recommended that the reinstatement of the 9.5-percent duty be delayed until March 1980, so that the change would be least disruptive for the projects already underway.

The considerable leadtime needed for construction of these platforms, plus the fact that the two contracts already had been awarded, meant that the delay would not result in harm to U.S. manufacturers or to employment in the United States.

If this assumption is not correct, the TPSC would appreciate information being brought to its attention.

Any future contracts on oil drilling platforms would have to take the 9.5-percent duty into account in their cost estimations, as the duty change would already be in effect by the time future platforms could be ready for importation to the United States.

The TPSC's recommendation, which was enacted by Executive Order 12124 of February 28, 1979, reflected a compromise which attempted to respond to both the concerns of American labor unions and the steel industry, plus the Brown & Root Co. located in Malaysia, which is currently involved in production of oil drilling rigs.

The TPSC felt that its decision would be satisfactory for everyone. It addresses the concerns of the U.S. steel industry and the trade unions, by reimposing the duty on oil drilling platforms, and gives Brown & Root (Labuan) sufficient leadtime to finish its current construction project.

Brown & Root indicated to the TPSC at the time of the hearings that the future principal focus of their operations would be oil exploration and drilling off the coast of Southeast Asia and Indonesia, rather than continued operations directed at the U.S. market.

Thank you very much.

The CHAIRMAN. I think we'll have John Lyons next.

Mr. LYONS. Mr. Chairman, I am pleased to appear before this panel on behalf of the 182,000 iron workers in North America, many of whom are directly involved in the fabrication and erection of offshore drilling platforms in the Outer Continental Shelf.

When I appeared before you on March 20, 1979, I presented an outline of what appeared to be special application of trade law, contrary to the intent of Congress, which cost our American work force an estimated 1 million man-hours of work, and which cost the American economy an estimated \$43 million. On top of these losses, there will soon be a multimillion-dollar loss to the U.S. Treasury in the form of duty-free treatment on two platform jackets fabricated in Malaysia.

This international association is concerned for a number of reasons. First, there is the obvious loss in work for our membership, several hundred of whom would be gainfully employed in California fabricating those platforms. Then, the series of decisions by Government officials has served to encourage this loss of work for our members and becomes a dangerous precedent for future decisions.

In addition, these Government decisions amount to special application of Federal law, a situation which any citizen would deplore. Ironworkers are taxpayers too, and their taxes to the U.S. Treasury must compensate for duty-free treatment offered to a plant located in Malaysia.

Finally, as we all know, the intent of Congress can often be nullified by executive branch action or inaction. That appears to be the case in this instance.

Let me briefly review this unusual situation. For a number of years, iron workers and other tradesmen in California had employed their skills in the fabrication and installation of offshore drilling platforms in the Santa Barbara Channel and the Gulf of Alaska. Up to that time, virtually all the platforms that went into OCS waters along the west coast were American produced, but all that changed drastically just about a year ago. In May and June of 1978, contracts for three platforms—Elly, Grace, and Ellen—for the Santa Barbara Channel were awarded to firms in Japan and Southeast Asia.

Naturally, we were surprised at the sudden turn of events and did not at the time suspect that the U.S. Government had a hand in this by encouraging imports of these platforms which were originally products of U.S. engineering, U.S. technology, U.S. industry, and U.S. manpower.

A few months later a letter dated May 11, 1978, from Mr. Salvatore E. Caramagno, Director of Value and Classification for U.S. Customs, surfaced. We were astonished at the wording of that letter to an undetermined party which seemed to invite importation of offshore platforms into the OCS from Japan and Malaysia. Thus the sudden turn of events appeared to have an origin within the U.S. Government.

That May 11 letter from Customs opened up two new loopholes by which trade predators could be encouraged to bid, for the first time, on platforms for OCS waters. The first loophole consisted of duty-free treatment on the massive and expensive platform jacket structures. That such a ruling twisted the law and ran contrary to the intent of Congress was made clear in August when the OCS conference committee ruled:

The Conferees were informed that the U.S. Customs Service has interpreted existing section 4(a)(1) to mean that foreign built production platforms are not subject to import duties when they are brought into OCS waters and attached to the seabed. Specifically, the Customs Service has stated that such platforms are not actually being imported to the United States until they are placed on the shelf and need not pay customs duties. The conferees reject this interpretation and believe it is contrary to the intent of Congress in enacting the 1953 act. Moreover, to make it explicit that this interpretation should not be continued to be given effect, the conferees state that one of the purposes of this change in 4(a)(1) is to make it clear that U.S. custom duties are to apply to platforms, built overseas, and brought into OCS waters for placement so that it can be used to develop and produce OCS minerals.

Then a curious thing happened—or rather, did not happen. Customs did not retract or rescind the May 11 ruling when Congress spoke through the OCS conference committee in August. Nor did Customs retract the ruling after President Carter signed the OCS bill into law 3 months later. This resistance on the part of Customs is a curious matter of speculation. In fact, Customs did not reverse that May 11 ruling, even under intense questioning from this panel

in December, for the record shows only partial retraction. The first loophole was closed, but a second one still stood.

That second loophole can be found in the last paragraph of the May 11 letter: "Merchandise classifiable under item 652.98, TSUS, which is a product of Malaysia may be entitled to duty-free treatment under the generalized system of preferences (GS), if the requirements for eligibility are met." There is no mention of Malaysia or the generalized system of preferences in the revised ruling of Customs in December.

So, on January 24, this international association took the matter to the trade policy staff committee at the office of special trade representative for emergency action to remove offshore platforms from the GSP. We contended, and still contend, that these platforms were never placed on the GSP eligibility list through proper and lawful procedure. Only the President, through executive order, can place specific items on the GSP list, and certainly not the Director of Value and Classification of Customs. The trade policy staff committee agreed to our emergency petition by assigning offshore platforms to a new TSUS number not on the GSP list.

However, the TPSC introduced yet a third loophole, something called delayed action, which to our knowledge has never been used in any Executive order relating to the GSP. All 800-plus items in President Carter's executive order were to take effect on March 1, 1979, except for one, single, solitary item—the very same offshore platforms which were treated to two strange loopholes in trade law previously. That delayed action ruling means that the two offshore platform jackets from Malaysia will soon arrive into the Santa Barbara channel duty free, as originally intended, U.S. law and the intent of Congress notwithstanding.

Mr. Chairman, this series of three loopholes which only distort U.S. trade laws and the intent of Congress deserves full investigative effort from your staff. Our trading partners throughout the world have learned a lesson from this strange case involving offshore platforms that U.S. trade policy can be subverted.

Full exercise of your oversight responsibilities of OCS law will demonstrate to our trading partners that the United States is governed by law, not by special consideration from the executive branch.

Now, in concluding my remarks at this point I would like to point out that the gentleman from the committee has indicated that they reached this recommendation to the President based on—I believe he said on an assumption—and then in a previously transmitted statement of his, where they said the TPSC recommended the reinstatement be delayed so that the change would be the least disruptive.

But at the time of the hearing, and on the record, at the special hearing, the question was asked of the Brown & Root representative: "You may not want to answer this, and you may want to submit it as business confidential, but since it has occurred * * *." The question: "Was the fact that you could get duty-free entry a factor in the bid that you submitted?"

Mr. Archer, who represented Brown & Root: "I cannot answer that question. I am personally not aware of the fact that we could."

Then the same question was asked later by Mr. Lande: "Let me just ask one final question then. You have already answered this. I want it clearly for the record. You do not know whether the decision to procure the jackets from Malaysia would have been different if these items were not on GSP?" Mr. Archer: "No, I do not know."

Of course, maybe things do slip by and so forth, but in any event, the testimony on the open record at the special hearing flies in the face of the statements as to why it was awarded. It was awarded based upon either an assumption or a recommendation that Brown & Root had bid anticipating special preferences. That was never on the record. I don't know how that conclusion could have been arrived at to make such a recommendation.

The CHAIRMAN. Thank you, Mr. Lyons.

Mr. Schifflin, where is Mr. Caramagno?

Mr. SCHIFFLIN. Where is he?

The CHAIRMAN. Yes.

Mr. SCHIFFLIN. I really don't know.

The CHAIRMAN. He was invited here to be a witness.

Mr. SCHIFFLIN. Yes, sir, but I really don't know where he—he has some other official business, I know that.

The CHAIRMAN. So how did you get here?

Mr. SCHIFFLIN. He asked me to appear.

The CHAIRMAN. When?

Mr. SCHIFFLIN. He asked me yesterday afternoon, about 4:30—wait a minute. I mean Friday, about 4:30. He said something had come up and would I come, because I was familiar with the case.

The CHAIRMAN. Tell Mr. Caramagno I've got a communication coming to him concerning his nonappearance.

Mr. Schifflin, can a simple letter from Mr. Caramagno, in answer to an inquiry, add an article to the GSP eligibility list when ordinarily it takes an Executive order to accomplish that?

Mr. SCHIFFLIN. No, sir. We can't add anything to a GSP list. All we can do is say merchandise is classified under *x* tariff number, and then we can say the *x* tariff number is or is not covered by the GSP. In other words, it's in the law.

The CHAIRMAN. In the May 11, 1978, letter regarding duty on offshore platforms, to whom was that letter addressed?

Mr. SCHIFFLIN. F. R. Becker, manager, tax services, tax compliance department, Shell Oil Co., Houston, Tex.

The CHAIRMAN. May we have a copy of that letter? We would like a copy for the record.

[The following was received for the record:]

MAY 11, 1978.

Mr. F. R. BECKER,
Manager, Tax Services, Tax Compliance Department,
Shell Oil Co., Houston, Tex.

DEAR MR. BECKER: This is in reference to your letter of April 27, 1978, concerning the tariff status of offshore drilling and production platforms from Japan or Malaysia.

In Headquarters letter dated March 8, 1977, file No. 101854, you were advised that offshore drilling platforms erected or attached to the seabed of the Outer Continental Shelf are not considered imported into Customs territory. However, once there exists on the Continental Shelf a fixed structure erected for the purpose of exploring for or exploiting the natural resources of the shelf, then Customs and navigation laws are applicable to such structure, with the result that merchandise

imported to such platform is subject to the imposition of duty. This rule follows from the Outer Continental Shelf Lands Act, 43 U.S.C. 1338(a)(1) which provides: "The Constitution and laws and civil and political jurisdiction of the United States are extended to the subsoil and seabed of the outer Continental Shelf and to all artificial islands and fixed structures which may be erected thereon for the purpose of exploring for, developing, removing, and transporting resources therefrom, to the same extent as if the outer Continental Shelf were an area of exclusive Federal jurisdiction located within a State."

The subject merchandise will consist of offshore drilling and production platforms affixed to the seabed of the outer Continental Shelf nine miles from shore by piling. Each of the two platforms, two hundred feet apart and connected by a steel walkway, will consist of a jacket and deck. The jacket is a multi-legged, flat-topped pyramidal structure which will be towed to the erection site by barge, tilted into the vertical position and then piled into the seabed. Once affixed, it will rise 15 feet above the surface of the ocean. The deck will have several levels for housing equipment and personnel and will be mounted above the jacket.

Your present inquiry prompts us to determine at what point a fixed structure exists, so that the rule, subjecting merchandise imported to the platform to duty, goes into effect.

It is our position that such platform will not be considered a fixed structure until the jacket and deck are assembled at the site of erection and ready to receive outfitting and ancillary equipment such as cranes, towers, elevators, connecting steel walking bridges, and living quarters. Each platform, consisting of jacket and deck, will be considered fixed structures under the Outer Continental Shelf Lands Act at this point. Such ancillary equipment, including drilling and production machinery, supplies and furnishings, imported to these platforms will be considered imported into Customs territory and subject to duty. In the absence of a full and complete description of the equipment, we are unable to give you definite advice concerning the rate of duty applicable.

It is pertinent to note, however, that if the jacket and deck were assembled for erection in the territorial waters of the United States, i.e., within the traditional three-mile limit, then the jacket and deck would be considered imported and classifiable under the provision for structures and parts thereof, in item 652.98, Tariff Schedules of the United States (TSUS), subject to duty at the rate of 9.5 percent ad valorem.

Merchandise classifiable under item 652.98, TSUS, which is a product of Malaysia may be entitled to duty-free treatment under the Generalized System of Preferences (GSP), if the requirements for eligibility are met. We are enclosing a copy of General Headnote 3(c), TSUS, which sets forth the requirements under GSP. We are also enclosing a copy of part 10.171, Customs Regulations, concerning GSP.

Sincerely yours,

SALVATORE B. CARAMAGNO,
Director, Classification and Value Division.

The CHAIRMAN. Was your ruling made before or after bids were submitted for the two offshore platforms now being built in Malaysia?

Mr. SCHIFFLIN. I don't know when the bids were let. I do know the letter was in response to a request of April 27, 1978.

The CHAIRMAN. What prompted the specific mention of Malaysia in the last paragraph of the May 11 letter?

Mr. SCHIFFLIN. Reading the first paragraph of the May 11 letter, "This is in reference to your letter of April 27, 1978, concerning the tariff status of offshore drilling and production platforms from Japan or Malaysia."

Whenever anybody asks us, and if we know the product is coming from a GSP country, first we will give the rate of duty and then we'll say merchandise from this particular country is entitled to GSP treatment provided all regulations and so forth are met.

Many times people won't ask. Many times people won't know about GSP. But if we see they are interested in a product from that particular country, we will mention it to them. In other words, we'll give them full information.

The CHAIRMAN. Were you aware, when you made your ruling, that section 501 of the Trade Act of 1974 states—and I quote: “The President may provide duty-free treatment for any eligible article in the GSP”? Note that the law says President and not the Director of Classification and Value Division of U.S. Customs.

Mr. SCHIFFLIN. No, sir. We didn’t provide for any duty-free treatment. All we said was that merchandise classified under 652.98 is entitled to duty-free treatment under the generalized system of preferences because that’s what the law stated. We didn’t make the law. We just said what the law is. The law said 652.98 GSP duty free, and that’s what we told the inquirer.

The CHAIRMAN. Were you also aware that section 501 also states, and I quote: “The President shall have due regard for import-sensitive steel articles”?

Mr. SCHIFFLIN. Was I aware of it? Well, I realize that steel is sensitive, let me put it that way. Steel is sensitive, a sensitive article. I realize that.

The CHAIRMAN. Very sensitive.

Mr. SCHIFFLIN. Yes, sir. I appreciate it.

The CHAIRMAN. Why then did you or Mr. Caramagno encourage, with your May 11, 1978, letter, the request to seek duty-free treatment for this import-sensitive steel article, despite the Trade Act of 1974, which spells out the intent of Congress?

Mr. SCHIFFLIN. We didn’t encourage anybody. All we said was drilling rigs are dutiable under item 652.98, and item 652.98 is a GSP item number. Since he asked about Malaysia, we told him it was duty free. We didn’t encourage anybody. We just answered the question.

It just seems to me, if somebody could have discussed this ahead of time, that—I think you are laboring under some misinformation or misinterpretation of what we have done. It’s just a normal, routine matter that we handle.

The CHAIRMAN. Mr. Miller.

Mr. MILLER. Thank you, Mr. Chairman.

It is my understanding that the contracts that were signed, or the contracts under which the two jackets are being built in Malaysia by Brown & Root, those contracts were, in fact, signed before any action was taken by the special trade group with regard to GSP. Is that right, Mr. Lande?

Mr. LANDE. Do you mean the original contracts back in 1975? The original decision to designate this particular number—

Mr. MILLER. No, no. I mean the contract between Brown & Root and their subsidiary in Malaysia to build the rigs there, that those contracts, with or without knowledge of the GSP, in fact had already been signed, correct?

Mr. LANDE. I believe so, but I don’t know what knowledge they had. But I believe that is correct.

Mr. MILLER. My understanding is they were. Do you know, Mr. Lyons, if in fact that was the case?

Mr. LYONS. The contract that was awarded for these two jackets was issued in August. They were brought out to bid in May. The Caramagno letter came in May, apparently at about the same time.

Mr. MILLER. But in terms of the action, the removal of the jackets that took place in January, that action, your petition before

the special trade group, my petition for testimony in support of the issues that the ironworkers raised, those contracts were already in fact signed?

Mr. LYONS. Yes.

Mr. MILLER. Those two.

Mr. LYONS. Yes.

Mr. MILLER. It seems to me—You know, I think there's some validity to the position that has been taken here by the Special Trades Commission, in that when you try to change the GSP system in terms of the importation and tariff duties, that as much as it is disruptive—because I happen to be in one of the areas that would benefit from the construction, and currently we are constructing rigs in the bay area, once again at the Kaiser yards—that I'm not sure, because we don't like the system under which contracts were let, that you can go back and punish those people who made them. I think it's an unfortunate decision that this office determined that jackets should be included on the list. That was a wrong decision, and it is was unfortunate in light of the steel sensitivity, the jobs lost, the fact that revenues are going to be lost to those two jackets.

But I think it is also realistic to suggest that when you change that decision, you can't penalize those people for the decisions that the Government made. I would prefer those two rigs being built in the San Francisco Bay area. But my concern was more important there—and I think your long-term concern—was that we don't allow that to continue as a subsidy for importation of foreign steel.

I don't want to characterize your position, but I'm trying to get some clarification here that the long-term detrimental impact of allowing the jackets to remain on the GSP list is far greater a threat to the jobs that the ironworkers and steelworkers in this country, than these two rigs.

Mr. LYONS. Well, our long-term concern, sir, is that, one, that we had a series of rulings here that were made, that nobody ever quite understood if they existed before or the basis upon which they were made.

Now, if the end result is that Brown & Root did have assurances that they would be duty free when they bid, I wouldn't want to hurt Brown & Root, but I would want to know how they did get those assurances.

Mr. MILLER. I understand that.

Mr. LYONS. Second, when the record shows that Brown & Root won't say that they had assurances they were given duty free, that they anyway were given an extension just in case they might have.

Well, if they did have assurances that these were duty free, they should say so and they should say how they got those assurances. Nobody will do that.

Mr. MILLER. OK. So in terms of our oversight in this committee, we're more concerned about the procedure in which that assurance—unless they are riverboat gamblers and make themselves out to be—but it's the procedure by which that assurance was received, and also the procedure that I think the chairman has expressed, that I was rather astounded at in our December hearings, how you got the jackets on the list in the first place, which I think was a decision which maybe concerns you. Because you then had the

potential to have basically a Federal subsidy of foreign jobs, if you will, at that point.

Mr. LYONS. I should add to what I said a second ago, with respect to—how did they arrive at that decision. We feel it's important that we know how they arrived at that decision so that it doesn't happen again. Because, if you can go through these two or three steps that nobody understands, and end up with a foreign import, undercutting American working conditions, we think it's important that it be clear on the record of how those steps take place. By that means, we can make sure they don't happen again, inadvertently or any other way.

Mr. MILLER. With respect to the decision to remove the jackets and postpone the effective date, we don't have any information, either the Special Trade Council's office or through the union, do we, that there is going to be additional foreign contracts let that would come duty free?

Mr. LANDE. In point of fact, Mr. Congressman, we made the decision because one of the witnesses, Mr. Archer, specifically stated that it was his understanding—and talking in a technical way—that no one, repeat, that no one given the long leadtime could take advantage of the GSP treatment other than his company, which had already undertaken the construction of the two drilling rigs in question.

Mr. MILLER. So under that system it's going to be those two jackets and that's the end of it. They can still do it, obviously, but they can't receive the import duty preference.

Mr. LANDE. The TPSC rules of procedure specifically provide for new hearings, or for the opportunity for new hearings, if any new facts are brought to light. And what I tried to indicate in my testimony was that if it does become evident that the TPSC made the decision based on an incorrect fact or incorrect assumption, then at that particular time we would be able to have hearings and move very expeditiously.

Mr. MILLER. Thank you very much.

The CHAIRMAN. Mr. Livingston?

Mr. LIVINGSTON. No questions.

The CHAIRMAN. Mr. Lewis?

Mr. LEWIS. No questions.

The CHAIRMAN. Counsel?

Mr. O'BRIEN. Before we go back and analyze this retrospectively, can I take a look at the prospective picture and ask you, Mr. Lande, could this problem which we have been discussing here recur, in view of the fact that the committee and the Congress have made its intentions very clear in the legislative history of the 1978 amendments? Is it safe to say this would not recur?

Mr. LANDE. It is safe to say that this would not recur. There are procedures whereby petitioners can apply for products to be redesignated for GSP, as well as products to be taken off of GSP. However, in view of the fact that first the TPSC must establish that there is a good case for having such hearings, and two, in view of the views that have been laid out very clearly today, I agree with you, that I don't think this would happen again in relationship to this product.

Mr. O'BRIEN. Would you concur with that, Mr. Lyons? Are you satisfied that the decision which had been made, particularly with respect to taking cognizance of the 1978 OCS Lands Act Amendments, would prevent recurrence of the problem?

Mr. LYONS. Well, the fact that a company will come in and be asked the question: "Did you bid this under assurances that it would be duty free," and they won't answer the question, and then they get a duty-free ruling, the two of them fly in their face. So if those two facts fly in their face, I'm not too confident that other facts can't fly in the face of the record and get similar rulings.

Mr. O'BRIEN. So your answer is you are not satisfied?

Mr. LYONS. I have misgivings. The statements and the answers are clear that it can't happen again, but I do have misgivings.

Mr. O'BRIEN. Mr. Schifflin, you suggested that this was a routine matter. As I understand it—and please correct me if I'm wrong—the original action here was the May 11, 1978, letter. And when it came to the attention of Mr. Caramagno that the Trade Act had been contradicted or even supervened by the 1978 Amendments to the OCS Act, he, in effect, retracted the letter of May 11 and is now satisfied that the OCS Act's legislative history speaks dispositively of that; is that correct?

Mr. SCHIFFLIN. The May 11 letter was based on precedent I think back as far as 1967. We had ruled that an offshore drilling rig was classifiable in item 652.98. So that the May 11 letter didn't start anything. It was just—

Mr. O'BRIEN. It was a restatement of outstanding policy.

Mr. Lyons, let me ask you this: There seemed to be the suggestion and implication in your remarks that there was something wrong or awry leading up to that May 11, 1978 letter. Is that a correct characterization?

Mr. LYONS. Yes.

Mr. O'BRIEN. What do you think was wrong?

Mr. LYONS. One, to the best of our knowledge there had never been previously imported an offshore jacket into the United States. Therefore, for the Office of Customs to rule that that should fall in GSP classification 652.98, where was the background data to establish that. I believe Chairman Murphy's question coincided with our belief, that they didn't have the authority to make that particular classification.

Now, if he said it was done in 1967, or 1965—

Mr. SCHIFFLIN. When we were researching the May 11 decision, I think we went as far back as 1967.

Mr. O'BRIEN. Can you provide for the record whatever authority it was in 1967 that provided the basis for your determination, whatever document or policy it was in 1967? Would you provide that for us?

Mr. SCHIFFLIN. It was probably just an interpretation of the law.

Mr. O'BRIEN. Well, is it written somewhere?

Mr. SCHIFFLIN. Well, we would have to get the 1967 letter. You see, many times the classification is based on knowledge of what the thing is. Somebody comes up to you and says "I've got that big structure over there; where would you classify it?" There is no policy or anything else and you're going to classify it as a structure, I think.

Mr. O'BRIEN. I understand that the 1953 OCS Act, which defines here, has been amended, and that there was some general definition which is not as precise as our latest definition that's in the amendments. But there must be something written down some place, if you cite it as precedent——

Mr. SCHIFFLIN. No, it was a headquarters letter back in 1967.

Mr. O'BRIEN. Would you please provide that for the record for us?

Mr. SCHIFFLIN. I'll see if I can——

Mr. O'BRIEN. Mr. Lyons, are you suggesting that somebody has done something absolutely wrong and played a favorite here, or whatever their reasons may be?

Mr. LYONS. Counsel, I'm not suggesting that someone did something purposely wrong. I am suggesting that the procedures that were followed are unsubstantiated by the records upon which they were based, which means that the judgments could have been wrong, or the record on which that decision was made is not in the public record. There may be other things other than what we have seen. What we have seen does not substantiate that.

Therefore, there may be something else somewhere—I don't see why there should be, frankly. I believe they should be brought to light if there is something else somewhere. Or if the judgment was made based upon an erroneous conception of what was said, then I think the erroneous conception of what was said should be corrected and the decision changed.

I am not accusing any one person or any one company or any entity in that category with specifically and purposefully making a violation of the law. I am saying the record doesn't substantiate the decision.

Mr. O'BRIEN. I guess the appropriate term would be malfeasance. You don't see any malfeasance here?

Mr. LYONS. I think malfeasance would have to be established on more than a decision that isn't supported by a record.

Mr. O'BRIEN. Thank you.

Mr. Lande, can you tell me how much money we're talking about in lost revenue here, either you or Mr. Schifflin?

Mr. LANDE. They're talking about 9.5 percent of the value of the oil rigs, and perhaps Mr. Lyons might have better knowledge of how much the oil—I think they're worth about \$30 million, but I'm not—No, I think it's about \$8 million for jackets, but I'm really not positive enough to make that part of the record.

But if it was worth \$8 million, two rigs would be \$16 million, and 10 percent of that approximately is \$1.6 million. I am not sure of that base figure. I remember that coming up in the testimony.

Mr. LYONS. These were private records of the Shell Oil Co., what the bids of the three companies were. Nobody has divulged it. They haven't said what they're paying for them. Brown & Root hasn't said what they bid.

I think Mr. Lande's estimate would be on the low side of the ball park. I would say the figures there of \$8 million would be between \$8 and \$16 or \$18 million apiece, definitely at least \$8 million. So the figures for the taxes to the American people would be from that figure to double it.

Mr. O'BRIEN. Mr. Lyons, one final question.

Are you satisfied with the conclusion of this episode, the conclusion being the Executive order? Or would you like to see that Executive order changed?

Mr. LYONS. I would like to see the executive order changed.

Mr. O'BRIEN. How?

Mr. LYONS. I don't think there is any basis for the exception of the 1 year.

Mr. O'BRIEN. And how would you like to see it changed?

Mr. LYONS. That no exceptions be made.

Mr. O'BRIEN. Mr. Lande, is it possible to go back and change or modify an executive order, rescind it, amend it?

Mr. LANDE. It is possible to amend the executive order.

If I might respond to one of the points raised earlier, which I believe might be a misunderstanding in terms of our discussion, when we receive a petition in the GSP process, we have an inter-agency committee hearing under the trade policy staff committee. During those hearings we try to weigh the various objectives of the Trade Act in relationship to the particular action, both to promote the development of developing countries, and to take into account the interest of domestic producers of like or similar products.

In this case, we did analyze the situation, and the reason why we made the decision that the product should remain on for 1 more year was because we felt it would not cost one American job and it would not cost one American profit in the sense of the industries that are involved in manufacturing these items.

We did not wish to imply in our testimony that we made the decision because Brown & Root necessarily were under the assumption that they were to receive GSP treatment. But at the time that the contract was let, it was this assumption that existed that it would have GSP treatment and therefore we felt it would be fair and equitable to maintain the GSP benefit at least for the following year until 1980, but sending a clear and clarion signal to the world that anybody else who was involved in bidding for any new contracts, that they would lose the GSP benefit. That was the main reason behind this unique—at least we felt—somewhat equitable decision that we had taken.

Mr. O'BRIEN. Thank you, Mr. Chairman.

Mr. MILLER [presiding]. Are there any other questions from members of the committee?

Well, Mr. Lande, I agree with that analysis of the situation. I think when we consider what is the potential for new rigs on the west coast and Alaska, and the availability of that market to foreign steel and foreign labor, I think the fact that there is little or no likelihood that any additional rig would be built under this program, as unfortunate as it is that even these two rigs were classified in that manner—and I, too, am very concerned about how that classification was arranged at. I don't really argue, Mr. Schifflin, with your statement that it's routine. But I think sometimes maybe things become a little too routine and you forget what the impact is when you have something of this nature.

Because if you look at the GSP program, there is a lot of hats and sandals and monkeywood pods on that. There is not many steel rigs in this classification. I think that the procedure by which you

classify the jacket in this case, as opposed to monkeywood bowls, has got to be somewhat different. That's my concern.

Maybe that's something Congress ought to pay attention to, because if you're following out guidelines—I don't know, and I guess that's what we hope to find out. But I think the end result in terms of that decision was about as fair and as equitable as you can get.

As I understand it within the industry, also, those people who were in direct competition with this company and with those foreign fabricators, also feel that they are now in a much stronger position than they would had nothing certainly been done.

Mr. Schifflin?

Mr. SCHIFFLIN. What I would like to say is maybe the term "routine" implies a not caring attitude. That is not what I meant. I meant it was a routine letter. Nobody came in and discussed it. We just went ahead, the way we always handle our cases. There was nothing special about it, that anybody came in and said——

Mr. MILLER. Well, the results were, both to Brown & Root and also special to the potential impact on this industry. That's my concern, that the results were special.

Mr. SCHIFFLIN. They did change it. But we have to tell people what the law says, so that the law can be changed to take care of the individual problem of the industry or union which may be involved. You just have to do it.

The CHAIRMAN. I have other questions for you, but to save time I would like you to respond in writing.

Mr. SCHIFFLIN. Yes, sir, I will be happy to.

[The following information was supplied for the record:]

U.S. CUSTOMS SERVICE,
THE COMMISSIONER OF CUSTOMS,
Washington, D.C., August 6, 1979.

Hon. JOHN M. MURPHY,
Chairman, Ad Hoc Select Committee on Outer Continental Shelf, House of Representatives, Washington, D.C.

DEAR MR. CHAIRMAN: In further reference to your letter of June 1, 1979, we are enclosing Mr. Caramagno's replies to the questions which you raised.

If we can be of any further assistance, please do not hesitate to call us.

Sincerely,

R. E. CHASEN,
Commissioner of Customs.

Enclosure.

Question 1. Mr. Caramagno, would you provide for the Committee a copy of the letter, dated April 27, 1978, that you received from Mr. F. R. Becker of Shell Oil Company?

Answer. [Attached is a copy of F. R. Becker's letter of April 27, 1978.]

SHELL OIL Co.,
Washington, D.C., April 27, 1978.

COMMISSIONER OF CUSTOMS,
Washington, D.C.

(Attention of Mr. J. B. Tebeau, Director, Carriers, Drawback and Bonds Division).

DEAR SIR: Reference is made to your letter dated March 8, 1977. Your file reference is VES-3-15-R:CD:C 101854 ML. It relates to the classification of imported offshore drilling and production platforms for duty purposes.

At that time numerous concepts of platform structures which could be employed to develop offshore oil fields were under consideration.

We are now considering the purchase of a steel structure to be fabricated of foreign steel in foreign yards and installed on an O.C.S. (Outer Continental Shelf) lease some nine miles offshore. The attached map shows the proposed location of the structure with respect to the mainland and an offshore island.

The structure consists of two major parts, a drilling structure and a production structure. Each structure consists of a jacket which extends from the seabed to approximately fifteen feet above water level and a deck which is above water and provides the work areas and supports the drilling and production equipment.

The two jackets are of the template bottom-supported type as described at the bottom of page one of your referenced letter dated March 8, 1977. They will arrive by barge.

The drilling platform jacket will be the first component of the structure installed. It will be firmly affixed to the seabed by piling before any other components are installed. The drilling platform deck (in several sections), the conductors and drilling equipment will be lifted into place, completing the drilling platform.

The production jacket will then be installed at a distance of about two hundred feet from the first jacket. It will be firmly affixed to the seabed by piling before any other components are installed. The deck and production equipment will then be lifted into place, completing the production platform.

The two platforms will then be connected by a steel walkway bridge with pipe and wire crossings for transfer of fluids and power between platforms, thus becoming a single structure.

We would appreciate your ruling on the following questions:

1. If the structure is not imported into the Customs territory of the U.S. as a floating structure, but is erected on the Outer Continental Shelf, nine miles off-shore, more or less, is it correct that no duty on the structure will be imposed? (See page five of your letter dated March 8, 1977.)

2. At what point in time, if any, will the provisions for dutiability of merchandise become applicable to such "fixed" structure:

- (a) When the first jacket is attached to the seabed?
- (b) When the drilling platform deck is attached?
- (c) When the second jacket is attached to the seabed?
- (d) When the production platform is attached?
- (e) When the two platforms are connected by a bridge?
- (f) When drilling commences?
- (g) When production commences?
- (h) Some other time?

(This has reference to the last sentence appearing on page five of your letter dated March 8, 1977.)

3. What would the rate of duty, if any, be for:

- (a) Drilling platform jackets?
- (b) Drilling platform deck (in several sections) and conductors?
- (c) Production platform jacket?
- (d) Production platform deck (in several sections) and risers?
- (e) Connecting steel wealking bridge (with pipe and wire crossings)?
- (f) Drilling machinery and equipment?
- (g) Production machinery and equipment?

4. Will equipment separately imported require separate duty treatment? (See page three of your letter dated March 8, 1977.)

5. Will the fact that the components are all of Japanese manufacture/fabrication alter any of the above?

6. Will the fact that the components are fabricated of Japanese steel in the Malaysian state of Sabah alter any of the above? (See TSUS—General Headnotes and Rules of Interpretation)

7. What is necessary in order to establish the following facts for purposes of question 6: "... A. the sum of (1) the cost or value of the materials produced in the beneficiary developing country plus (2) the direct costs of processing operations performed in such country is not less than 35 percent of the appraised value of such article at the time of entry into the customs territory of the U.S. ..."

The location of the proposed drilling site is considered to be proprietary information by Shell Oil Company, and should be regarded as private and confidential. It would not be appropriate for release to the public. Please do not publish this information, or release it to any unauthorized persons.

We would appreciate your answer to the above questions at the earliest possible date. Please submit your reply to the following address: Shell Oil Company, P.O. Box 20329, Houston, Texas 77025.

Yours very truly,

LEONARD J. SULLIVAN,
(For F. R. Becker,
Manager, Tax Services,
Tax Compliance Department).

Question 2. As you know, as a result of your May 11, 1978, letter in response to Mr. Becker's request, the OCS Conference Committee reiterated its position in August of 1978: "Specifically, the Customs Service has stated that such platforms are not actually being imported to the United States until they are placed on the shelf and need not pay Customs duties. The Conferees rejected this interpretation and believe it is contrary to the intent of Congress in enacting the 1953 Act. Moreover, to make it explicit that this interpretation should not be continued to be given effect, the Conferees stated that one of the purposes of this change in 4(a)(1) is to make it clear that U.S. Custom duties are to apply to platforms, built overseas and brought into OCS waters for placement so that it can be used to develop and product OCS minerals." Are you aware of that report? When did you first become familiar with Congressman Miller's amendment regarding this subject?

Answer. Yes, we are aware of that report. There is evidence in Customs Chief Counsel's file that the report was forwarded to Customs around August 24, 1978. The Division of Classification and Value became aware of Congress' wishes in the matter around October 10, 1978. It is our recollection that work on a draft letter to be published so that everyone would know of the new position on drill rigs started immediately.

Question 3. Were you aware of the fact that the contract for these two rigs was issued in August or was going to be issued?

Answer. We were not aware of any contracts for drill rigs. Inquiries rarely, if ever, make Customs privy to details regarding their contracts when requesting classification information. Information regarding such contracts would generally have no bearing on the classification of merchandise.

Question 4. What was the exact date of this contract? Before or after the August 10, 1978, Conference Report?

Answer. As previously stated we have no knowledge regarding any contract.

Question 5. Why, then, did you not retract your May 11, 1978, letter immediately in order to conform with the intent of Congress?

Answer. Our letter of May 11, 1979, was, in effect, retracted as of September 18, 1978, the effective date of Public Law 954-372. Note the last paragraph of attached Customs Service Decision 79-1. Considering all factors including work load and available staff, CSD 79-1 was accomplished as quickly as possible.

Question 6. Do you think that the contract for these two rigs was issued in August to beat the deadline of the Conference Report and circumvent Congressional intent?

Answer. We have no information as to why the contract was issued in August.

Question 7. Taking under consideration the fact that Customs have never ruled on this issue before, what do you suppose prompted Shell Oil to request such a ruling?

Answer. Customs held in 1967 that offshore drilling platforms which remain outside the territorial waters of the United States would not be dutiable. As stated in our letter to your Committee dated June 5, 1979, the classification of these structures under item 652.98, Tariff Schedules of the United States (TSUS), as structures of steel, was fixed by the United States Customs Court in 1972 in *J. Ray McDermott & Co. v. United States*, C.D. 4394. We have no information as to what Shell was prompted to request a ruling in their letter of April 27, 1978, except as they stated in the 3rd paragraph of their letter.

Question 8. Do you know of any previous communications between Shell Oil and Brown and Root regarding this issue?

Answer. We have no knowledge of any communications between Brown and Root and Shell Oil.

Question 9. Did you or any member of your staff have any previous communications with either of these two companies or with the Office of the Special Trade Representative regarding this matter?

Answer. Apparently Shell first raised the question of classification by letter of October 1, 1975. A response was given on March 8, 1977. They wrote again on April 27, 1978, and we replied on May 11, 1978. We did not discuss this with STR.

Question 10. You will recall that your May 11, 1978, letter addressed two related issues or loopholes: One dealing with offshore platforms as "fixed structures" and the other dealing with GSP eligibility for Malaysia. Now, a Customs ruling from Leonard Lehman, Assistant Commissioner, dated December 5, 1978, clears up the first matter but does not straighten out the GSP matter to conform with the intent of Congress. Do you know why?

Answer. The Customs Service has no jurisdiction over the G.S.P. We have no authority to add to or delete items from the tariff schedules or to make items dutiable or duty-free under G.S.P. The responsibility for maintenance of the list of articles eligible for GSP treatment is vested in STR.

Question 11. When Mr. Paul Giguere, from your office, appeared before this Committee in December, he said: "We have a conflict between a ruling and the

intention of this Committee," referring specifically to offshore platforms imported into OCS waters. Do you find a similar conflict between the intent of Congress and your ruling?

Answer. We have conferred with Mr. Giguere who point out that his full statement before your committee was to the effect that there was a conflict between implementation of Title V of the Trade Act of 1974, which provides for the duty-free entry of the offshore platforms, and the intention of your committee that they should be dutiable.

Insofar as CSD 79-1 holds that drilling rigs imported to the Outer Continental Shelf are subject to duty, Customs position is consonant with the intent of Congress. However, as long as item 652.97, TSUS, entitles drilling rigs to free entry under the GSP, there is a conflict. The Customs Service has no jurisdiction over matters involving a change in GSP status.

Question 12. Given the time lag between the August Conference Committee report and Customs revised ruling in December, how long would it take for you to rescind your May 11, 1978, ruling, retroactive to September 18, 1978, when the new OCS law took effect?

Answer. That portion of the letter of May 11, 1978, which speaks of free entry for drilling rigs imported to the Outer Continental Shelf has been rescinded by CSD 79-1 effective September 18, 1978. The Customs Service has no authority to rescind duty-free entry which is permitted under the GSP.

Question 13. In that event, then, how do you propose to ensure that these platforms from Malaysia meet the 35% requirement for GSP eligibility?

Answer. As required for all merchandise valued over \$250 and entered under the GSP, Customs will require submission of a certificate of Origin Form A. The Form A is a document issued and certified by a designated governmental authority from the beneficiary developing country. The Form A certifies the country of origin of the merchandise and the percentage of value added in that country. If, at the time of entry, a Customs officer has evidence that the Form A is inaccurate or incorrect, the Form A will be submitted to Customs Headquarters for reverification by the issuing authority. In requesting reverification, Customs will usually request the cost breakdown used by the issuing authority in making the value-added determination.

Question 14. What documents will your Customs agents in California use to determine if the 35 percent rule is met?

Answer. As stated in Answer No. 13, the Form A will be used unless evidence indicates that reverification and a submission of the substantiating cost breakdown are necessary.

Question 15. Are these documents always sufficient to make such a determination?

Answer. A certified Form A provided by an issuing authority is usually sufficient for making a determination that an eligible article satisfies the 35 percent requirement. However, there is always room for doubt in those cases in which foreign authorities must apply U.S. Customs Law.

Question 16. Has Customs ever before asked for additional documentation to prove GSP eligibility?

Answer. Yes, Customs has previously requested additional documentation to prove GSP eligibility.

Question 17. Could you provide this Committee with the documentation upon which Customs in California determines the 35 percent GSP eligibility on those two platforms from Malaysia, as soon as they arrive?

Answer. Yes, Customs could provide the Committee with the documentation, provided that any proprietary information contained therein be used solely for the purposes of the Committee's inquiries and that such information not be released to the public.

Mr. MILLER. Mr. Lyons?

Mr. LYONS. Mr. Chairman, with respect to Mr. Lande's last observation, with respect to that decision, certainly we are not up here to see anyone hurt. We are not here recklessly charging malfeasance. But we do think that the record should be established conclusively as to whether Brown & Root did have that amount of money figured in its bid, and if so, where did they arrive at the judgment to do that. Because they are refusing to say that they had that money in their bid, that they did not figure that consideration in their bid.

Was Shell Oil Co. playing? Were there other American fabricators playing under a different set of rules? Did that \$3 million or so per jacket with respect to the lost revenue, did that impact on the other companies, that maybe another company would have had that job instead and it would be fabricated by American workers?

It seems to me that to leave this hinge and let the ruling stand, based upon an assumption that was made there, that the company that is the beneficiary of the \$3 million won't even say whether they did or did not figure in that tax savings when they prepared a bid, I think is to leave it open ended. Because if they did not, they got a \$3 million windfall. If they did, I think it's important for the committee to know how did they ever reach that kind of conclusion. Did they base it upon that simple letter of Mr. Caramagno's, and if so, that's a rather nebulous type of a judgment for that much money.

Mr. MILLER. But you can also suggest—and I think there is no question of where I am on this issue—but you could also suggest that to their detriment they relied on that decision because they may have built the yard in Malaysia based upon their belief they were going to build a whole series of rigs and now they have found out they haven't. Then the other people in the industry were the smart ones because they didn't follow their lead and contract to have rigs built overseas, that they would never realize that benefit from.

You know, it's a little bit like a ruling from the IRS. You can get a letter and you can get a ruling, and you can get a decision. You know, the question of whether you want to make that your personal decision, or corporate decision, you take your chances in some cases.

Mr. LYONS. That's true to a certain extent, Congressman Miller. You can build three or four rigs in any temporary site with almost no additional capital expenditure than you would to build anything.

For example, the west coast offshore platforms, we have had them built in shipyards, we've had them built on temporary sites, that were previously navy yards; we have them built on temporary sites that were set up—American Bridge built three of them down there in Los Angeles. On the west coast it was Kaiser that decided that if they built a yard and really invested a lot of money in a yard, to put in some really big equipment, and then bid on a lot of jobs, then you do put in a sizable capital investment in that particular location and then go out and hope to get the jobs.

Now, whether Brown & Root is building plants to build three or four over there and then see what the market is, they haven't really expended that much money. If they have set up a Kaiser-type of yard over there, they then have expended a lot of money.

For that answer, you have to go over and take a look at it. I don't know.

Mr. MILLER. I'm saying that I don't know that, either. But I'm not sure I would want to expend the money just on the lift equipment.

Mr. LYONS. I wouldn't want to make the trip.

Mr. MILLER. Mr. Lande?

Mr. LANDE. I would just like to comment to another aspect of your statement concerning the GSP procedures.

The GSP program was established in 1974 by the Trade Act that passed Congress. It was a new program and the first time we ever had dealt with unilateral grants for developing countries.

It is not a perfect program in the way it is administered, and for that reason, either in June or September we are going to be having hearings on how to better implement the GSP program. In that regard, any specific suggestions that any interested party has, we would very much appreciate, since we have to report to Congress by December 31 concerning the operation of the program.

Thank you, sir.

Mr. MILLER. We may take advantage of that offer in this case.

Thank you very much, both of you, for your testimony. If there are no other questions by members of the committee, the committee will stand adjourned until—I think our next hearing is in June. That's my understanding.

[Whereupon, at 4:35 p.m., the committee was adjourned.]

[The following material was submitted for inclusion in the printed record:]

International Association of

BRIDGE, STRUCTURAL AND ORNAMENTAL IRON WORKERS

JOHN H. LYONS
GENERAL PRESIDENT
202 872-1568

Affiliated with AFL-CIO



SUITE 400
1750 NEW YORK AVE. N.W.
WASHINGTON, D. C. 20006



April 3, 1979

Mr. Lawrence O'Brien, Esquire
Chief Counsel
Ad Hoc Select Committee
on Outer Continental Shelf
Room 1324 Longworth House Office Bldg.
Washington, D. C. 20515

Dear Mr. O'Brien:

I am pleased to reply to your question from the March 20 hearings, stated on page 67 of the attached, corrected testimony, also per your request.

The yard in Malaysia is owned 100 percent by Brown and Root of Houston, Texas. I have attached a letter from the company to the Trade Policy Staff Committee to that effect. It is also a known fact that Brown and Root has part ownership in the Nippon-Kokan Steel Company in Japan, and perhaps other Japanese companies.

We remain willing to cooperate with the OCS Committee to get to the bottom of this mysterious loophole in U. S. trade law that presently encourages a U. S. runaway firm to benefit from a law originally intended for a developing country. Meanwhile, an estimated \$3.5 million loss to the U. S. Treasury hangs in the balance.

Sincerely yours,

John H Lyons
GENERAL PRESIDENT

JHL:ks

International Association of
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JOHN H. LYONS
 GENERAL PRESIDENT
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SUITE 400
 750 NEW YORK AVE N.W.
 WASHINGTON, D.C. 20006

April 3, 1979

The Honorable John Murphy
 U. S. House of Representatives
 Washington, D. C. 20510

Dear Congressman Murphy:

Thank you for the opportunity to appear before the Ad Hoc Select Committee on the Outer Continental Shelf on March 20. To paraphrase your opening statement at those hearings, we hope that the exercise of Congressional oversight can bring action where there has been inaction and sudden concern where there has been lassitude or disinterest.

The potential loss of several million dollars to the U. S. Treasury certainly falls in that category and deserves your oversight. How a runaway U. S. firm can benefit from a tariff break designed for lesser-developed nations remains a mystery, given the Executive Order of February 28 which flies in the face of intent of Congress.

One of the two platform jackets is scheduled to arrive in the Santa Barbara Channel this spring from Malaysia. We do hope the Ad Hoc Committee will soon conduct an oversight investigation of the recommendation from the Trade Policy Staff Committee to single out only one item among the 800 GSP items for delayed action.

Besides the millions of dollars lost to the U. S. Treasury in customs duties, this delayed action also represents making a mockery of our trade laws by giving special treatment to one company, beyond the intent of Congress.

We remain willing to cooperate fully in your oversight investigation of this loophole in U. S. trade practice and congratulate the wisdom of Congress in the recent vote to sustain and continue the Ad Hoc Committee.

Sincerely yours,

John H. Lyons
 GENERAL PRESIDENT

JHL:ks

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SUITE 400
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WASHINGTON, D. C. 20001

87

December 5, 1978

The Honorable John M. Murphy
U. S. House of Representatives
Washington, D. C.

RE: Matters Before Outer Continental
Shelf Committee

Dear Congressman Murphy:

I am enclosing a copy of a petition I have filed with the President's Special Representative for Trade Negotiations.

This petition is a direct result of the congressional discussion and passage of Public Law 95-372.

You will recall that while this law was making its way through the Congress an official of the U. S. Customs Service issued a ruling to the effect that offshore drilling and production platforms were not subject to tariff duty if installed beyond the three-mile limit. Your conference report on what became P.L. 95-372 specifically addressed itself to this ruling. You stated that you believed it to be erroneous, and that to make assurance doubly sure you were amending the 1953 law to remove any doubt that such offshore drilling and production platforms were subject to customs duties.

We are very happy you did this.

But there is another problem with that May 11, 1978 Customs Service ruling, a problem which has become more acute with the passage of P. L. 95-372.

The last paragraph of the ruling referred to GSP for Malaysia. It, in effect, provided that offshore drilling and production platforms shipped from Malaysia to the U. S. were entitled to duty-free treatment under the Generalized System of Preferences of the Trade Act of 1974. Now that duty will be assessed on such a platform from a developed country like Japan, efforts will be made to traffic these platforms to the USA by way of a GSP beneficiary country like Malaysia or Brunei to

International Association of
BRIDGE, STRUCTURAL AND ORNAMENTAL IRON WORKERS

The Honorable John M. Murphy

-2-

December 5, 1978

take advantage of the duty-free GSP provision. The platforms will still, for all intents and purposes, be constructed in Japan; only assembly work will be done in the developing country and almost assuredly primarily by skilled craftsmen imported from Japan. The first such platform - or sections thereof - is scheduled to be delivered from Brunei to our West Coast next year.

The purpose of my petition is to remove offshore drilling and production platforms from the GSP eligibility list.

The Office of the Special Representative for Trade Negotiations will conduct a hearing on my petition probably during the first half of January 1979.

As the petition argues, it was never the intent of the Congress to include such high technology structures as these platforms on the GSP eligibility list.

I believe an opinion on this issue by your committee might be helpful in clarifying the matter, and if your committee does set forth an opinion, such should be forwarded to Ambassador Strauss for his information and guidance.

Very truly yours,

John H. Lyons
 GENERAL PRESIDENT

JHL:ks

Enc.

International Association of
 BRIDGE, STRUCTURAL AND ORNAMENTAL IRON WORK

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 GENERAL PRESIDENT
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SUITE 400
 1750 NEW YORK AVE. N.E.
 WASHINGTON, D. C. 20002



October 23, 1978

Ambassador Robert S. Strauss
 Special Representative for
 Trade Negotiations
 1800 G Street, N. W.
 Washington, D. C. 20506

Dear Ambassador Strauss:

Transmitted herewith is a petition for emergency action with respect to the provision on duty-free treatment of offshore drilling and production platforms.

To the best of our ability this petition is assembled in the manner prescribed by the 1974 Trade Act and contains the necessary requested information. We would appreciate your immediate action and attention to this matter.

Very truly yours,

John H. Lyons
 GENERAL PRESIDENT

JHL:ks

Encls.

OCTOBER 23, 1978

PETITION

For Removal of TSUS 652.98 from GSP Under section 2007, chapter 20 of Title 15: Commerce and Foreign Trade

This is a request for emergency action with respect to the provision of duty-free treatment for offshore drilling and production platforms under the Generalized System of Preferences (GSP).

The petitioner is: The International Association of Bridge, Structural and Ornamental Iron Workers.

The petitioner represents employees engaged in the fabrication of offshore drilling and production platforms.

The products of interest to the petitioner are offshore drilling and production platforms for the West Coast of the United States, including Alaska, classified under the provision for Structures and Parts thereof, in Item 652.98 Tariff Schedules of the United States (TSUS), subject to duty at the rate of 9.5 percent ad valorem. The offshore drilling and production platforms are used for the purpose of exploring and drilling for oil and gas, and may be placed within the three-mile limit or as far from shore as the outer continental shelf.

This is a request that duty-free treatment accorded to eligible articles under the GSP be withdrawn from Item 652.98 TSUS, or alternatively that offshore drilling platforms erected or attached to the seabed be subdivided out of the present TSUS classification 652.98, and removed from eligibility for GSP duty-free treatment.

We request emergency consideration of this petition. Offshore drilling and production platforms are enormous structures costing into the tens of millions of dollars and weighing into the tens of thousands of tons. Each one is fabricated to separate specifications. Bidding and orders must take place many months before fabrication and placement. It is expected that off the southern California coast alone a minimum of 10 such rigs will be located in waters depths between 150 and 1300 feet within the next 3½ years. Bidding is now being prepared for the first of these. The total labor involved in each rig averages 1.04 million manhours.

The emergency nature of this petition arises from a ruling made by the Customs Service on May 11, 1978, with respect to such platforms, and the effect of Public Law 95-372, signed by the President on September 18th, which contains amendments designed to nullify that ruling. This action by the Customs Service and reaction by the Congress will have the effect of enormously increasing the tendency of the Japanese manufacturers of such rigs to move the finishing stages of LDCs eligible for GSP duty free treatment. They will at the same time, of course, transfer large numbers of specialized workers to do most of the highly skilled operations. Because of the value of offshore drilling platforms, only one or two could come from each LDC under the competitive need limitation. This aspect will be discussed more fully in this petition. The point we wish to make here is that as long as TSUS 652.98 comes under eligible articles under GSP there will be unfair competition

from the Japanese to obtain such orders on the expectation that the could evade payment of duty by means of the last step manufacture in an eligible LDC.

These are the facts: on May 11, 1978 Salvatore E. Caramagno of the Customs Service handed down a ruling with respect to the classification and dutiability of offshore drilling rigs and production platforms from Japan or Malaysia. The text of this ruling is attached as Exhibit A.

It was about this time that the Japanese received all three contracts for offshore drilling rigs which were let in the Spring of this year. American companies were successful in winning only the deck fabrication on one. In all three cases, however, the installation contractor is American.

Under the ruling, if the rig were to be placed beyond the three mile limit, then it could come in duty free even if manufactured in an industrialized country. If it were destined for within the three mile limit, then it could escape tariff charges by being completed and barged from a GSP beneficiary developing country. It would be duty free in any case; and no need to waste precious competitive need dollars on outer continental shelf rigs. These could be constructed entirely in Japan and be towed directly to the drill site beyond the three-mile limit. The LDCs could be reserved for inner coastal areas, where otherwise a 9.5 percent ad valorem tariff would apply.

Meanwhile a bill S.9 "to establish a policy for the management of oil and natural gas in the Outer Continental Shelf; to protect the marine and coastal environment; to amend the Outer Continental Shelf Lands Act; and for other purposes," was making its way through the Congress. On August 10th the conference report signed by Senator Henry M. Jackson and Representative John M. Murphy, Chairman of the respective committees addressed itself specifically to this ruling by the Customs Service.

The report contained language as contained in Exhibit B.

The Customs Service will now have to amend its ruling. A Japanese company can no longer manufacture the whole of an offshore drilling platform and bring it into the American continental shelf duty free.

The last paragraph of the ruling dealing with GSP is obviously a solution to circumvent the 9.5 percent duty.

The real work in constructing a rig is done in a steel mill and a fabricating plant. The final operation can be done on any level plot of ground with a minimum of industrial equipment. It is, therefore, possible for rigs to be built in Japan and then to be completed in a lessor developed country. As we say above, the specialized workers will come from Japan. The LDC economy will make only a limited contribution. Nevertheless, it will be possible to come within the 35% rule and, therefore, obtain duty free privileges.

If we had to wait until next year to present this petition at the regular annual review, then a number of contracts would be irretrievably lost and with them millions of manhours of work by American labor.

This petition could not be prepared in time for the current review, because, as stated above, the ruling was overruled only on September 18, 1978.

We respectfully request therefore that the issue of GSP eligibility for TSUS 652.98 be resolved now.

The report of the Committee on Finance United States Senate on the Trade Reform Act of 1974 explained the limitations which were to be established for eligible articles under GSP. Page 224 appears in Exhibit C.

"Certain steel products" were described as sensitive items to be excluded from receiving preference.

At the time this bill was under consideration offshore drilling and production platforms were not being imported to the United States. In the first place there was still an embargo on their use on the west coast, an embargo which was applied after the Santa Barbara break-out. And secondly, the Americans for all practical purposes still had the leadership on technology and use of such rigs.

In 1977 imports of steel products from all countries reached alarming proportions in the United States. In quick succession four steel mills were shutdown throwing thousands of workers out of their jobs. This International Association alone lost 139 fabricating shops, mainly due to unfair trade practices. The Administration established a task force led by Treasury's Under Secretary for Monetary Affairs Anthony M. Solomon to work out a program for dealing with this crisis. The result was the steel trigger price mechanism. The report to the President was called a Comprehensive Program for the Steel Industry. Beginning on page 19 there is a section called Potential Problems which deals with secondary effects of the trigger price mechanism. It is contained as Exhibit D.

This has now come to pass with respect to structural steel, particularly TSUS 652.98. And one of the items to which the Japanese particularly have transferred their attention is offshore drilling and production platforms. A single one of these behemoths will contain between 10 and 20 thousand tons of structural steel.

Certain steel products were excluded from the original GSP eligibility list of articles because they were sensitive items. Offshore drilling and production platforms were not included in these exclusions because they were not sensitive at that time. That is, they were not even being imported. Now they are. Now they should be excluded as they undoubtedly would have been had they been imported at the time the eligibility list was being compiled.

This reasoning and information has not been previously presented to the TPSC because, as indicated above, there were not imports of this article at the time.

Because this International Association is not engaged in the sale or distribution of offshore drilling rigs and production platforms, we do not have direct access to industry figures regarding the actual production and costs of these items. However, research in this area has been published in U.S. Marine Construction Survey, 1976-85 and is presented as Exhibit E.

Given the pattern-setting occurrences of this spring when foreign competitors discovered a way to secure duty free treatment for the export of offshore drilling rigs and production platforms, we urge that the Special Trade Representative inaugurate immediate emergency action to remove TSUS 652.98 from the Generalized System of Preference.

This is in reference to your letter of April 27, 1978, concerning the tariff status of offshore drilling and production platforms from Japan or Malaysia.

In Headquarters letter dated March 8, 1977, file No. 101854 ML, you were advised that offshore drilling platforms erected or attached to the seabed of the outer Continental Shelf are not considered imported into Customs territory. However, once there exists on the Continental Shelf a fixed structure erected for the purpose of exploring for or exploiting the natural resources of the shelf, then Customs and navigation laws are applicable to such structure, with the result that merchandise imported to such platform is subject to the imposition of duty. This rule follows from the Outer Continental Shelf Lands Act, 43 U.S.C. 1333(a)(1) which provides:

"The Constitution and laws and civil and political jurisdiction of the United States are extended to the subsoil and seabed of the outer Continental Shelf and to all artificial islands and fixed structures which may be erected thereon for the purpose of exploring for, developing, removing, and transporting resources therefrom, to the same extent as if the outer Continental Shelf were an area of exclusive Federal jurisdiction located within a State."

The subject merchandise will consist of offshore drilling and production platforms affixed to the seabed of the outer Continental Shelf nine miles from shore by piling. Each of the two platforms, two hundred feet apart and connected by a steel walkway, will consist of a jacket and deck. The jacket is a multi-legged, flat-topped

pyramidal structure which will be towed to the erection site by barge, tilted into the vertical position and then piled into the seabed. Once affixed, it will rise 15 feet above the surface of the ocean. The deck will have several levels for housing equipment and personnel and will be mounted above the jacket.

Your present inquiry prompts us to determine at what point a fixed structure exists, so that the rule, subjecting merchandise imported to the platform to duty, goes into effect.

It is our position that each platform will not be considered a fixed structure until the jacket and deck are assembled at the site of erection and ready to receive outfitting and ancillary equipment such as cranes, towers, elevators, connecting steel walking bridge, and living quarters. Each platform, consisting of jacket and deck, will be considered a fixed structure under the Outer Continental Shelf Lands Act at this point. Such ancillary equipment, including drilling and production machinery, supplies and furnishings, imported to these platforms will be considered imported into Customs territory and subject to duty. In the absence of a full and complete description of the equipment, we are unable to give you definite advice concerning the rate of duty applicable.

It is pertinent to note, however, that if the jacket and deck were assembled for erection in the territorial waters of the United States, i.e., within the traditional three-mile limit, then the jacket and deck would be considered imported and classifiable under the provision for structures and parts thereof, in item 652.98, Tariff Schedules of the United States (TSUS), subject to duty at the rate of 9.5 percent ad valorem.

Merchandise classifiable under item 652.98, TSUS, which is a product of Malaysia may be entitled to duty-free treatment under the Generalized System of Preferences (GSP), if the requirements for eligibility are met. We are enclosing a copy of General Headnote 3(c), TSUS, which sets forth the requirements under GSP. We are also enclosing a copy of part 10.171, Customs Regulations, concerning GSP.

Sincerely yours,

~~Salvatore E. Caramagno~~
Salvatore E. Caramagno

Director

Classification and Value Division

The Committee has received assurances that sensitive products would be excluded from receiving preferences. Ambassador Eberle's letter, reprinted below, indicates that textiles and apparel products subject to the international textile agreement would be excluded, along with footwear, watches, certain steel products, and other sensitive items.

THE SPECIAL REPRESENTATIVE FOR TRADE NEGOTIATIONS,
Washington, November 7, 1974.

The Hon. RUSSELL B. LONG,
Chairman, Committee on Finance, United States Senate,
Washington, D.C.

DEAR MR. CHAIRMAN: In his message to Congress accompanying submission of the Trade Reform Act on April 10, 1973, former President Nixon specified certain categories of import-sensitive products intended to be excluded from a generalized system of preferences for articles from eligible developing countries.

In response to questions concerning this Administration's commitment to such exclusions, I reaffirm the intention of the Executive Branch to exclude from tariff preferences textile and apparel products which are subject to textile agreements, footwear products,* watches, certain steel products and other items which may be considered import-sensitive in the context of generalized preferences.

I note in this connection that the same prenegotiation procedures, including public hearings and advice from the Tariff Commission and from other Executive Departments, which are to be followed for articles subject to negotiated concessions, also are to be observed prior to the designation of any specific articles as eligible for generalized preferences. I assure you that these procedures, including the report of the Tariff Commission on the probable economic effect of granting preferences for any specific article, will be considered in determining whether to grant or deny preferential treatment. I further assure you that the interests of the Commonwealth of Puerto Rico and United States insular possessions will be taken into account in making determinations with respect to sensitive articles.

Yours sincerely,

W. D. EBERLE.

4. Potential Problems

Implementation of the trigger price approach, particularly the monitoring of imports of thousands of different products, poses substantial problems. However, these problems are qualitatively no different than those that would be required in the effective monitoring of a quantitative restraint approach or in full-scale administration of the Antidumping Act. Initial efforts to implement the trigger price approach will undoubtedly not be perfect, but experience in working under it should teach us how to cure its inadequacies. There are nevertheless two problems which may not be fully met by the proposed system:

- The system extends only to steel mill products; hence, there is some risk that steel fabrications will substitute for the more basic steel products in U.S. imports, as occurred during the quantitative import restrictions on steel mill products imposed in the late 1960s..
- Exporters may attempt to shift their mix of products to the highest valued items in each product category and, thus, "skim the cream" of the trade while leaving lower-valued, less profitable items to the domestic industry.

The Customs Service Task Force implementing the system will be alerted to these problems. Should sales of fabrications or top-of-the-line items provide significant opportunities for evasion of the intended relief of the system, appropriate action will be taken.

presidential documents

Title 3— The President

Executive Order 12124 of February 28, 1979

Amending the Generalized System of Preferences

By virtue of the authority vested in me by the Constitution and statutes of the United States of America, including Title V and Section 604 of the Trade Act of 1974 (88 Stat. 2066, 19 U.S.C. 2461 *et seq.*; 88 Stat. 2073, 19 U.S.C. 2483), and as President of the United States of America, in order to modify, as provided by Section 504(c) of the Trade Act of 1974 (88 Stat. 2070, 19 U.S.C. 2464(c)), the limitations on preferential treatment for eligible articles from countries designated as beneficiary developing countries, and to adjust the original designation of eligible articles taking into account information and advice received in fulfillment of Sections 503(a) and 131-134 of the Trade Act of 1974 (88 Stat. 2069, 19 U.S.C. 2463(a); 88 Stat. 1994, 19 U.S.C. 2151-2154), it is hereby ordered as follows:

SECTION 1. In order to subdivide existing items for purposes of the Generalized System of Preferences (GSP), the Tariff Schedules of the United States (TSUS) (19 U.S.C. 1202) are modified as provided in Annex I, attached hereto and made a part hereof.

SECTION 2. Annex II of Executive Order No. 11888 of November 24, 1975, as amended, listing articles that are eligible for benefits of the GSP when imported from any designated beneficiary developing country, is further amended as provided in Annex II, attached hereto and made a part hereof.

SECTION 3. Annex III of Executive Order No. 11888, as amended, listing articles that are eligible for benefits of the GSP when imported from all designated beneficiary countries except those specified in General Headnote 3(c) (iii) of the TSUS, is amended by substituting therefor the new Annex III, attached hereto and made a part hereof.

SECTION 4. General Headnote 3(c)(iii) of the TSUS, listing articles that are eligible for benefits of the GSP except when imported from the beneficiary countries listed opposite those articles, is amended by substituting therefor the new Annex IV, attached hereto and made a part hereof.

SECTION 5. General Headnote 3(c)(i) of the TSUS is modified—

(i) by adding, in alphabetical order, to the list of independent designated beneficiary developing countries for the purposes of the Generalized System of Preferences "Comoros", "Djibouti", and "Seychelles"; and by deleting from the list of non-independent designated beneficiary developing countries and territories "Comoro Islands", "French Territory of the Afars and Issas", and "Seychelles."

(ii) by deleting from the list of independent designated beneficiary developing countries "Central African Republic", "Congo (Brazzaville)", "Maldives Islands", and "Republic of China", and by substituting therefor, in alphabetical order, "Central African Empire", "Congo", "Maldives", and "Taiwan", respectively.

(iii) by deleting from the list of non-independent designated beneficiary developing countries "Falkland Islands (Malvinas) and Dependencies", "Pit-

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cairn Island", and "Spanish Sahara", and by substituting therefor, in alphabetical order, "Falkland Islands (Islas Malvinas)", "Pitcairn Islands", and "Western Sahara", respectively.

(iv) by deleting from the list of non-independent designated beneficiary developing countries "Portuguese Timor."

SECTION 6. The amendments made by this Order shall be effective with respect to articles that are both: (1) imported on or after January 1, 1976, and (2) entered, or withdrawn from warehouse, for consumption on or after March 1, 1979.



SECTION 7. Effective March 1, 1980, Annex II to Executive Order 11888, as amended, is further amended by deleting item 652.97, TSUS.

THE WHITE HOUSE,
February 28, 1979.

ANNEX I

GENERAL MODIFICATIONS OF THE TARIFF SCHEDULES OF THE UNITED STATES

NOTES:

1. Bracketed matter is included to assist in the understanding of the ordered modifications.
2. The following items, with or without preceding superior descriptions, supersede matter now in the Tariff Schedules of the United States (TSUS). The items and superior descriptions are set forth in columnar form and material in such columns is inserted in the columns of the TSUS designated "Item", "Articles", "Rates of Duty 1", and "Rates of Duty 2", respectively.

Subject to the above notes the TSUS is modified as follows:

1. Item 361.20 is superseded by:

[Floor coverings . . .:]			
[Other:]			
"361.21	With over 50 percent by weight of the fibers, exclusive of any core, being jute.....	8% ad val.	: 35% ad val.
361.22	Other.....	8% ad val.	: 35% ad val."

2. Item 386.08 is superseded by:

[Articles not specially provided for, of textile materials:]			
[Lace or net articles . . .:]			
"386.06	Of wool.....	25% ad val.	: 90% ad val.
	Other:		
386.07	Shoe uppers.....	25% ad val.	: 90% ad val.
386.09	Other.....	25% ad val.	: 90% ad val."

3. Item 387.30 is superseded by:

[Articles not specially provided for, of textile materials:]			
[Other articles, not ornamented:]			
[Of vegetable fibers, except cotton:]			
"Other:			
387.32	Of jute.....	6.5% ad val.	: 40% ad val.
387.34	Other.....	6.5% ad val.	: 40% ad val."

4. Item 648.81 is superseded by:

[Pliers, nippers, and pincers . . .:]			
[Pliers, nippers, and pincers . . .:]			
"Slip-joint pliers:			
648.80	Not forged, valued not over \$6 per dozen.....	20% ad val.	: 60% ad val.
648.82	Other.....	20% ad val.	: 60% ad val."

5. Item 652.98 is superseded by:

[Hangars and other buildings, bridges, bridge sections . . .:]			
"Other:			
652.97	Offshore oil and natural gas drilling and production platforms.....	9.5% ad val.	: 45% ad val.
652.99	Other.....	9.5% ad val.	: 45% ad val."

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6. Items 653.49 and 653.51 are superseded by:

	[Stoves, central-heating furnaces . . .:]		
"653.48	Stoves (except hibachis) wholly or almost wholly of cast-iron, and parts thereof wholly or almost wholly of cast-iron.....	6% ad val.	: 45% ad val.
653.52	Other.....	6% ad val.	: 45% ad val.

7. Item 635.32 is superseded by:

	[Radiotelegraphic and radiotelephonic . . .:]		
	"Record players, phonographs, record changers, turntables, and tone arms, and parts of the foregoing:		
685.34	Tone arms and parts thereof....	5.5% ad val.	: 35% ad val.
685.36	Other.....	5.5% ad val.	: 35% ad val.

8. Item 731.60 is superseded by:

	"Equipment designed for sport fish- ing, fishing tackle, and parts of such equipment and tackle, all the foregoing not specially provided for:		
731.65	Artificial baits and flies.....	12.5% ad val.	: 55% ad val.
731.70	Other.....	12.5% ad val.	: 55% ad val.

9.(a) Item 732.37 is superseded by:

	[Parts of bicycles:]		
"732.38	Three speed hubs whether or not incorporating a coaster brake; caliper brakes; multiple free- wheel sprockets.....	15% ad val.	: 30% ad val.
732.39	Other parts of bicycles.....	15% ad val.	: 30% ad val.

(b) Conforming change: Item 912.10 is
modified by deleting "and 732.37" and
substituting ", 732.38, and 732.39"
in lieu thereof.

10. Item 791.25 is superseded by:

	[Leather cut or wholly or partly . . .:]		
	"Other:		
791.24	Uppers lasted or otherwise fabricated with midsoles or insoles.....	5% ad val.	: 15% ad val.
791.26	Other.....	5% ad val.	: 15% ad val.

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ANNEX II

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Annex II to Executive Order No. 11838, as amended by Executive Orders Nos. 11905, 11934, 11974, 12032, 12041, and 12104 and Proclamation Nos. 4561 and 4632 is amended--

(a) by deleting the following TSUS item numbers:

106.70	254.56	610.66	702.47
107.48	254.58	610.71	706.47
107.65	304.40	612.40	708.57
107.80	304.58	622.40	708.91
121.15	308.35	632.60	710.36
121.55	308.55	646.82	722.55
121.56	355.20	650.83	724.35
146.12	364.14	650.89	725.32
147.35	365.05	651.13	726.90
148.25	408.40	651.45	731.10
152.54	417.22	651.51	731.30
152.58	418.24	651.62	731.50
154.40	418.78	652.98	731.60
154.55	420.78	653.25	732.62
161.53	420.98	653.51	734.20
161.69	422.24	657.30	735.09
162.11	426.34	660.42	737.35
177.12	427.08	676.20	740.75
200.06	427.16	680.52	741.15
200.91	437.24	680.54	748.15
220.50	455.16	682.60	748.40
222.34	455.30	683.15	751.15
240.10	460.60	684.10	756.40
240.12	465.15	684.70	760.33
240.21	473.32	685.40	774.35
240.30	473.50	686.24	790.07
240.34	522.71	687.30	790.59
240.50	531.21	688.30	791.17
240.56	544.11	696.10	
245.00	545.31	696.50	
245.20	546.21	702.14	
252.25	603.45	702.20	

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(b) by adding in numerical sequence, the following TSUS item numbers:

112.94	361.21	603.50	652.99
113.50	366.84	607.65	653.30
131.35	370.17	612.02	653.52
135.98	386.09	612.60	680.53
140.09	387.32	612.63	680.54
140.14	403.40	622.25	680.55
140.55	405.45	624.40	680.56
145.52	407.12	624.42	685.34
149.15	417.20	624.50	688.20
153.02	419.00	628.40	700.54
153.03	420.02	628.50	702.08
153.28	420.82	629.26	702.25
156.35	426.12	642.08	702.40
156.45	427.60	644.14	710.34
161.75	445.20	644.28	711.30
166.30	460.35	646.04	713.17
176.15	460.70	646.88	723.32
176.70	470.15	646.89	728.20
182.10	473.62	648.80	730.77
188.34	473.78	648.89	731.70
204.40	490.30	649.71	732.38
222.44	494.40	649.89	734.40
222.62	514.44	650.15	734.42
240.38	515.54	650.21	734.54
240.40	517.21	650.31	748.20
240.58	517.24	650.45	750.32
254.63	520.39	650.56	771.45
306.53	540.47	650.79	773.20
306.71	545.35	651.33	790.60
308.51	546.23	651.49	791.20
308.80	601.54	652.93	791.26
337.20	602.30	652.97	791.70
			792.30

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TSUS Item Number

106.70	148.72	222.10	365.05
107.48	148.77	222.34	389.61
107.65	149.50	240.02	403.58
107.89	152.43	240.10	403.79
114.05	152.54	240.12	403.40
121.15	152.58	240.16	408.75
121.52	154.40	240.19	416.05
121.55	154.55	240.21	417.22
121.56	155.20	240.30	418.24
130.35	155.35	240.34	418.78
130.40	156.40	240.50	420.78
135.51	161.53	240.56	420.98
135.80	161.69	245.00	422.24
135.90	162.11	245.20	422.76
136.00	168.15	252.25	425.84
136.30	176.33	254.56	426.34
136.80	177.12	254.58	427.08
136.92	177.72	256.60	427.16
137.40	182.90	256.85	437.16
137.71	184.65	304.04	437.24
137.75	186.20	304.40	437.64
138.05	186.40	304.44	446.10
140.21	190.68	304.48	455.16
140.25	192.85	304.58	455.30
141.35	200.06	305.22	460.60
141.55	200.91	305.28	461.15
141.70	202.40	305.30	465.15
141.77	202.62	306.52	465.70
145.08	203.20	308.30	466.05
145.53	206.45	308.35	473.32
145.60	206.47	308.50	473.50
146.12	206.60	308.55	473.52
146.22	206.98	319.01	473.56
146.44	220.10	319.03	473.82
147.33	220.15	319.05	493.21
147.36	220.20	319.07	511.31
147.80	220.25	335.50	514.11
147.85	220.35	347.30	514.54
147.88	220.37	355.04	516.24
148.12	220.41	355.20	516.71
148.25	220.48	360.35	516.73
148.35	220.50	364.14	

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TSUS Item Number

516.74	653.25	702.20	737.30
516.75	653.47	702.45	737.35
518.41	653.48	702.47	737.50
520.35	653.70	703.20	737.80
522.71	653.85	703.65	737.95
531.21	653.93	703.75	740.10
533.26	557.24	704.34	740.30
535.31	657.30	706.40	740.34
544.11	660.42	706.47	740.38
545.31	660.44	708.57	740.75
545.37	662.18	708.91	741.15
545.53	662.35	710.36	741.20
545.65	672.10	713.15	741.50
545.81	674.56	713.19	745.08
545.85	676.20	722.55	748.12
546.21	676.23	724.35	748.15
547.41	676.52	725.32	748.40
603.45	678.50	726.70	750.05
610.66	682.60	726.90	750.35
610.71	683.15	727.31	751.05
612.03	683.70	730.25	751.10
612.06	683.80	730.27	751.15
612.15	684.10	730.29	751.20
612.40	684.50	730.41	756.40
613.15	684.70	731.10	760.38
622.40	685.24	731.30	760.65
626.22	685.40	731.50	772.03
632.60	685.90	732.62	772.35
646.82	686.24	734.10	772.51
646.86	686.30	734.20	772.97
646.98	687.30	734.25	773.10
649.75	688.10	734.30	774.35
650.83	688.12	734.34	774.60
650.87	688.30	734.51	790.07
650.89	688.40	734.56	790.39
651.01	690.15	734.60	790.59
651.13	692.27	734.75	790.61
651.45	696.10	734.87	790.62
651.51	696.35	735.09	790.70
651.62	696.50	735.11	791.17
652.84	702.14	735.20	791.80
653.02	702.15	737.25	792.50
			792.60
			792.75

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"(iii) The following designated eligible articles provided for in TSUS item numbers preceded by the designation "A*", if imported from a beneficiary developing country set opposite the TSUS item numbers listed below, are not entitled to the duty-free treatment provided for in subdivision (c)(ii) of this headnote:

<u>TSUS</u> <u>item No.</u>	<u>Country or</u> <u>territory</u>	<u>TSUS</u> <u>item No.</u>	<u>Country or</u> <u>territory</u>
106.70	Mexico	148.25	Mexico
107.48	Argentina	148.35	Mexico
107.65	Bangladesh	148.72	Chile
107.80	Argentina	148.77	Republic of Korea
114.05	Republic of Korea	149.50	Mexico
121.15	Mexico	152.43	Dominican Republic
121.52	India	152.54	Brazil
121.55	India	152.58	India
121.56	Argentina	154.40	Taiwan
130.35	Argentina	154.55	Taiwan
130.40	Mexico		(Argentina
135.51	Mexico		(Brazil
135.80	Nicaragua		(Colombia
135.90	Mexico		(Dominican Republic
136.00	Dominican Republic		(El Salvador
136.30	Mexico		(Guatemala
136.80	Mexico	155.20	(Guyana
136.92	Israel		(India
137.40	Mexico		(Jamaica
137.71	Mexico		(Nicaragua
137.75	Costa Rica		(Panama
138.05	Mexico		(Peru
140.21	Mexico		(Philippine Republic
140.25	Mexico		(Taiwan
141.35	Turkey		(Thailand
141.55	Dominican Republic	155.35	Barbados
141.70	Taiwan		(Brazil
141.77	Mexico	156.40	(Ivory Coast
145.08	Philippine Republic	161.53	Egypt
145.53	Turkey	161.69	Mexico
145.60	Taiwan	162.11	Syria
146.12	Argentina	168.15	Trinidad
146.22	Turkey	176.33	Malaysia
146.44	Philippine Republic	177.12	Panama
147.33	Jamaica	177.72	Cayman Islands
147.36	Israel	182.90	Panama
147.80	Mexico	184.65	Taiwan
147.85	Brazil	186.20	Brazil
147.88	Mexico	186.40	Mexico
148.12	Mexico	190.68	Mexico

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<u>TSUS</u> <u>item No.</u>	<u>Country or</u> <u>territory</u>	<u>TSUS</u> <u>item No.</u>	<u>Country or</u> <u>territory</u>
192.35	Mexico	304.58	India
200.05	Hong Kong	305.22	India
200.91	Honduras	305.28	Thailand
202.40	Philippine Republic	305.30	Thailand
202.62	Mexico	306.52	Peru
203.20	Malaysia	308.30	Brazil
206.45	Philippine Republic	308.35	Hong Kong
206.47	Taiwan	308.50	Republic of Korea
206.60	Mexico	308.55	Republic of Korea
206.98	Taiwan	319.01	India
220.10	Portugal	319.03	India
220.15	Portugal	319.05	India
220.20	Portugal	319.07	India
220.25	Portugal	335.50	India
220.35	Portugal	347.30	India
220.37	Portugal	355.04	Mexico
220.41	Portugal	355.20	Taiwan
220.48	Portugal	360.35	India
220.50	Portugal	364.14	Haiti
222.10	Hong Kong	365.05	Haiti
222.34	Philippine Republic	389.61	Hong Kong
240.02	Philippine Republic	403.58	Israel
240.10	Nicaragua	403.79	Mexico
240.12	Brazil	403.40	Mexico
240.16	Taiwan	403.75	Romania
240.19	Taiwan	416.05	Mexico
240.21	Mexico	417.22	Mexico
240.30	Mexico	418.24	India
240.34	Taiwan	418.78	Mexico
240.50	Taiwan	420.78	Turkey
240.56	Honduras	420.98	Brazil
245.00	Romania	422.24	Mexico
245.20	Brazil	422.76	Mexico
252.25	Argentina	425.84	Netherlands Antilles
254.56	Hong Kong	426.34	Taiwan
254.58	Hong Kong	427.08	Hong Kong
256.60	Republic of Korea	427.16	Argentina
256.85	Mexico	437.16	India
304.04	Philippine Republic	437.24	Brazil
304.40	Thailand	437.64	Brazil
304.44	Brazil	446.10	Malaysia
304.48	Kenya		

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<u>TSUS</u> <u>item No.</u>	<u>Country or</u> <u>territory</u>	<u>TSUS</u> <u>item No.</u>	<u>Country or</u> <u>territory</u>
455.16	Taiwan	613.15	Mexico
455.30	Israel	622.40	Brazil
460.60	India	626.22	Peru
461.15	Bermuda	632.60	Peru
465.15	Cayman Islands	646.82	Taiwan
465.70	Argentina	646.86	Hong Kong
466.05	Jamaica	646.98	Mexico
473.32	Cyprus	649.75	Taiwan
473.50	Mexico	650.83	Hong Kong
473.52	Mexico	650.87	Hong Kong
473.55	Mexico	650.89	Hong Kong
473.82	Republic of Korea	651.01	Hong Kong
493.21	Taiwan	651.13	Hong Kong
511.31	Mexico	651.45	Taiwan
514.11	Dominican Republic	651.51	Hong Kong
514.54	Mexico	651.62	Peru
516.24	India	652.84	Mexico
516.71	India	653.02	Mexico
516.73	India	653.25	Peru
516.74	India	653.47	(Republic of Korea
516.76	India		(Taiwan
518.41	Mexico	653.48	Taiwan
520.35	Thailand	653.70	Hong Kong
522.71	Somalia	653.85	Taiwan
531.21	Mexico	653.93	Taiwan
533.26	Romania	657.24	Taiwan
535.31	Mexico	657.30	Taiwan
544.11	Romania	660.42	Brazil
545.31	Taiwan	660.44	Mexico
545.37	Taiwan	662.18	Republic of Korea
545.53	Mexico	662.35	Mexico
545.65	Mexico	672.10	Hong Kong
545.81	India	674.56	Mexico
545.85	Taiwan	676.20	Taiwan
546.21	Taiwan	676.23	Argentina
547.41	Hong Kong	676.52	(Hong Kong
603.45	Republic of Korea		(Mexico
610.66	Israel		(Hong Kong
610.71	Israel	678.50	(Republic of Korea
612.03	(Chile		(Taiwan
	(Peru	682.60	Mexico
612.06	(Chile	683.15	Mexico
	(Peru	683.70	Hong Kong
	(Zambia	683.80	Hong Kong
612.15	Mexico	684.10	Taiwan
612.40	Cayman Islands	684.50	Hong Kong
		684.70	Taiwan

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<u>TSUS</u> <u>item No.</u>	<u>Country or</u> <u>territory</u>	<u>TSUS</u> <u>item No.</u>	<u>Country or</u> <u>territory</u>
685.24	(Hong Kong (Republic of Korea (Singapore (Taiwan	734.56	Haiti
685.40	Republic of Korea	734.60	Taiwan
685.90	Mexico	734.75	Republic of Korea
686.24	El Salvador	734.87	Taiwan
686.30	Taiwan	735.09	Taiwan
687.30	Malaysia	735.11	Taiwan
688.10	Taiwan	735.20	Taiwan
688.12	Mexico	737.25	Republic of Korea
688.30	Republic of Korea	737.30	Republic of Korea
688.40	Hong Kong	737.35	Hong Kong
690.15	Mexico	737.50	Hong Kong
692.27	Mexico	737.80	Hong Kong
696.10	Taiwan	737.95	(Hong Kong (Taiwan
696.35	Taiwan	740.10	Hong Kong
696.50	Brazil	740.30	Hong Kong
702.14	Republic of Korea	740.34	Hong Kong
702.15	Taiwan	740.38	Hong Kong
702.20	Republic of Korea	740.75	Republic of Korea
702.45	Mexico	741.15	Taiwan
702.47	Mexico	741.20	Hong Kong
703.20	Portugal	741.50	Hong Kong
703.65	Mexico	745.08	Hong Kong
703.75	Mexico	748.12	Haiti
704.34	Taiwan	748.15	Taiwan
706.40	Hong Kong	748.40	Republic of Korea
706.47	Taiwan	750.05	Hong Kong
708.57	Republic of Korea	750.35	Taiwan
708.91	Republic of Korea	751.05	Taiwan
710.36	Republic of Korea	751.10	India
713.15	Mexico	751.15	Taiwan
713.19	Mexico	751.20	Taiwan
722.55	Hong Kong	756.40	Hong Kong
724.35	Republic of Korea	760.38	Mexico
725.32	Taiwan	760.65	Taiwan
726.70	Mexico	772.03	Hong Kong
726.90	Mexico	772.35	Taiwan
727.31	Republic of Korea	772.51	Republic of Korea
730.25	Turkey	772.97	Hong Kong
730.27	Philippine Republic	773.10	Hong Kong
730.29	Brazil	774.35	Taiwan
730.41	Brazil	774.60	(Hong Kong (Taiwan
731.10	Taiwan	790.07	Hong Kong
731.30	Taiwan	790.39	Taiwan
731.50	Taiwan	790.59	Taiwan
732.62	Taiwan	790.61	Taiwan
734.10	Taiwan	790.62	Taiwan
734.20	Hong Kong	790.70	Republic of Korea
734.25	Hong Kong	791.17	Argentina
734.30	Hong Kong	791.80	Taiwan
734.34	Hong Kong	792.50	Philippine Republic
734.51	Taiwan	792.60	Hong Kong
		792.75	Hong Kong"

[FR Doc. 79-6543

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DEPARTMENT OF THE TREASURY

U.S. CUSTOMS SERVICE

WASHINGTON



JUN 5 1979

REFER TO
CLA-2:R:CV:MA
061354 AS

The Honorable
John M. Murphy
Chairman, Ad Hoc Select Committee
on Outer Continental Shelf
House of Representatives
Washington, D.C. 20515

Dear Mr. Chairman:

Reference is made to the recent hearing of the Ad Hoc Committee on Outer Continental Shelf in which certain questions were raised regarding Customs actions in the classification of oil well drilling rigs.

The following is a brief summary of the history of the classification of this merchandise.

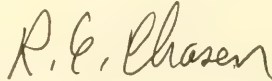
In 1968, there was an importation of an oil well platform jacket for use in the construction of an offshore drilling platform. Upon entry at the port of Anchorage, Alaska, this merchandise was classified under item 652.98, Tariff Schedules of the United States, which provided for structures and parts of structures of iron or steel. The importers protested this classification and the Customs Court, in J. Ray McDermott & Co., v. United States, C.D. 4394 (1972), upheld this classification.

On April 27, 1978, the Shell Oil Company requested the dutiable status of this type merchandise if imported from Malaysia and Japan. A request such as this is permissible under Section 177, Customs Regulations. On May 11, 1978, a reply was sent to Shell Oil advising them that the merchandise was properly classifiable under item 652.98, TSUS, and that if a product of Malaysia, the rig would be entitled to free entry under the Generalized System of Preferences (GSP) if the requirements for eligibility were met.

Merchandise classifiable under item 652.98, TSUS, was entitled to free entry under GSP inasmuch as item 652.98, TSUS, was designated as a duty-free item by Presidential Proclamation 11888 of November 24, 1975. It was not until March 1, 1979, that drill rigs were carved out of item 652.98, TSUS, and withdrawn from duty-free GSP status effective March 1, 1980. As long as item 652.98, TSUS, was a designated GSP item, drilling rigs which were properly classifiable under this item were duty-free and Customs had no choice but to advise inquirers of this fact.

The testimony that the letter of May 11, 1978, was based on a precedent as far back as 1967, was not entirely accurate due to the faulty recollection of the witness. The letter was based on the 1972 Court decision which upheld the 1968 Customs classification.

Sincerely,

A handwritten signature in cursive script, appearing to read "R. E. Phasen".

Commissioner of Customs

[From "The Ironworker", June 1979]

Brown & Root, Inc., J. Ray McDermott Co. Plead 'No Contest' To Fixing Bids On Offshore Construction, Pipeline Jobs

As three top executives of two of the largest construction firms in the world prepare to stand trial this month in New Orleans for conspiracy in restraint of trade and commerce, they leave behind a barely-told story of corporate intrigue and price-fixing in the multi-billion-dollar offshore construction industry.

According to Justice Department documents released recently, the chairman of the board and president of the J. Ray McDermott and Co., Inc. of New Orleans faces a charge of mail fraud in conspiring to fix bids on offshore work with another company; a group vice-president of the company faces eight counts of mail fraud and one count of wire fraud in the conspiracy; and an executive vice-president of Brown & Root, Inc. of Houston faces nine charges of mail fraud and one of wire fraud in connection with the same price-fixing conspiracy.

Within the past few months, three other high-ranking officers of the two companies pleaded "nolo contendere" or "no contest" to charges of conspiracy in violation of the Sherman Antitrust Act and mail fraud. In December, the two companies, J. Ray McDermott and Co., and Brown & Root, Inc., also entered similar pleas and received the largest such fines in history.

"Nolo contendere" is a Latin term which means "I do not contest" the charges. In U.S. legal terms, the plea in a criminal ac-

tion has the same effect as a plea of "guilty." Vice-President Spiro Agnew made the term famous shortly before his resignation from the second-highest office in the land. The Sherman Antitrust Act declares that conspiracy to restrain trade or commerce, by such actions as rigging bids, is illegal and punishable by fines and/or imprisonment. Mail fraud and wire fraud in executing such schemes are also punishable by fine and/or imprisonment.

A federal grand jury in New Orleans began an extensive investigation of the two companies more than two years ago to determine if these leaders in offshore construction were conspiring to fix their bidding from January 1960 through January of 1976. A Justice Department "bill of particulars" was released recently alleging that Brown & Root and McDermott kept separate "scorecards." According to the documents, both companies would bid on an offshore contract for piling, jackets, decks or pipeline, with the low bid collusively entered by the company whose turn it was to receive the work.

Victims of the conspiracy include such oil company giants as Tenneco, Texaco, Shell, Union Oil and Pennzoil. These and other defrauded firms may soon use the exposed information as a basis for civil antitrust lawsuits against the construction companies.

Shortly after the investigation

was discerned, the president of Brown & Root, Foster Parker, reportedly told a friend aboard Queen Elizabeth's yacht anchored off New York City: "The god-damn government has found out how we made all this money, and they're after us." That was in the summer of 1976, according to a Wall Street Journal reporter, and in January of 1977, at his home near a Houston country club, Foster Parker put a gun to his head and pulled the trigger.

A year or so later, the J. Ray McDermott Co. pleaded guilty in U.S. District court in New Orleans to seven counts of racketeering, wire fraud and illegal campaign contributions. Five top McDermott officers had admitted earlier to having paid more than \$500,000 in bribes to a Tenneco Oil Co. executive in order to gain "cost-plus" contracts for offshore construction in the Gulf of Mexico. Federal prosecutors charged that the Tenneco vice-chairman of the board agreed to award contracts for a 2.5 percent kick-back fee.

For those deals, the court ordered return of nearly \$900,000 in extra profits and levied a fine on McDermott Co. for \$25,000. The company also admitted to not reporting \$12,000 in cash brought in from outside the United States and making unlawful contributions to the congressional campaigns of Louisiana Republicans Henson Moore and David Treen. In all, the J. Ray

McDermott Co. paid more than a million dollars in forfeits and fines during that 1978 probe.

However, the ax fell again on Brown & Root and McDermott on December 14, 1978, when the U.S. District Court for the Eastern District of Louisiana handed down an 11-count indictment for conspiracy, mail fraud and wire fraud.

The indictment stated that the two companies engaged for 16 years since 1960 in a "conspiracy to suppress and eliminate competition in marine construction" by "discussing prospective marine construction projects and the submission of prospective bids, . . . selecting the marine construction projects, . . . designating the

low bidder, . . . exchanging information concerning bid amounts or bid ranges, . . . submitting intentionally high, or complimentary, bids on which one of the defendants or co-conspirators had been designated as low bidder; and submitting bids on marine construction projects containing false, fictitious and fraudulent statements and entries." The effects of this conspiracy included price-fixing, elimination of competition and denial of free and open competition in marine construction, according to the indictment.

Mail fraud was charged against six high-ranking officers of the two companies in "a scheme and artifice to defraud purchasers of marine construction services of money and their right to award contracts for marine construction services free from collusive bidding, corruption, deceit, trickery and dishonesty."

Both corporations pleaded "nolo contendere" to the charges of conspiracy and were fined the maximum amount, \$1 million, each, the largest ever in a price-fixing case.

Brown & Root and McDermott companies are said to have dominated the offshore construction industry since its inception three decades ago. Today, the companies are estimated to control more than three-quarters of the industry, with the rest of the offshore construction in the Outer-continental Shelf split between other U.S. construction firms and foreign competition.

The extent of ownership in foreign firms by the two companies is uncertain, but it is known that Brown & Root does have connections with at least one Japanese firm and does totally own an offshore fabrication yard on Malaysia. This U.S.-owned firm stands to gain duty-free treatment from U.S. Customs for two offshore platform jackets scheduled to ar-

FROM THE BILL OF PARTICULARS

A narrative description of how the conspiracy alleged was formed, giving the approximate date of formation and the names of those who participated in the formation.

The conspiracy charged in the indictment was formed prior to 1960 by unindicted co-conspirators of the defendants. It is believed that Roger W. Wilson (deceased), then a McDermott officer, and Garland L. ("Ox") Hinman, a Brown & Root employee, initiated the conspiracy. Like other conspiracies, however, this conspiracy was not born full grown. As the marine construction industry grew and matured, so did the conspiracy. The presumed agreement between Roger Wilson and Ox Hinman extended primarily to fixed offshore structures in domestic waters. Roger Wilson and Louis E. Minor, a Brown & Root executive, thereafter extended the conspiracy to the engineering, fabrication, and installation of undersea pipelines. Sometime in the late 1950s or early 1960s, the precise date being unknown, the conspiracy was extended to marine construction performed outside of United States waters. This extension was accomplished by Roger Wilson and Louis Minor.

In May of 1970, the conspiracy expanded. Defendant Robert Kenneth Richie, and unindicted co-conspirator James E. Cunningham met on behalf of McDermott with a Brown & Root officer and with officials of a foreign marine construction firm, and agreed that certain marine construction work would be collusively bid with that firm.

A general description of the role each named defendant played in the conspiracy.

Charles Leonidas Graves—From the time Graves joined the conspiracy, until the early 1970s, he participated by selecting marine construction projects to be rigged. He discussed these projects with his co-conspirators at Brown & Root, and his co-conspirators at McDermott, and he assured that his co-conspirators and subordinates made collusive bids on the marine construction projects selected by the conspirators. At or about the time Graves became McDermott's Chief Executive in 1972, he became less active in the day to day operations of the conspiracy. However, he was kept advised of the workings of his co-conspirators, and he directly participated in the collusive bidding of marine construction projects, from time to time. Graves also attended meetings of the conspirators in New Orleans, Houston and other locations, at which matters of interest to the conspiracy were discussed and decided. Thus, Graves was involved in selecting, preparing, formulating, approving, and quoting bids.

Robert Kenneth Richie—From the time Richie joined the conspiracy in the late 1960s, he participated by selecting marine construction projects which were to be rigged. He discussed these projects with his co-conspirators at Brown & Root and his co-conspirators at McDermott, and a foreign firm after 1970, and he assured that his co-conspirators and subordinates submitted collusive, non-competitive, bids on the marine construction projects selected by the conspirators. From time to time, he induced others in his company to join the conspiracy and carry on its operation. In 1970, when Brown & Root and McDermott were threatened by new competition in marine construction, Richie and a McDermott vice president met with a Brown & Root official and two officials of a foreign marine construction firm. Together they agreed that that firm would join in the conspiracy and submit collusive bids for marine construction to be performed in waters outside of the United States. Richie was headquartered in the United States, and attended conspiratorial meetings in New Orleans, and Houston, in addition to other locations inside and outside of the United States. Thus, Richie was involved in selecting, preparing, formulating, approving and quoting collusive bids.

Hosea Ware Bailey—From the time Bailey joined the conspiracy in the late 1960s, he participated by selecting marine construction projects which were to be rigged. He discussed these projects with his co-conspirators at Brown & Root and his co-conspirators at McDermott, and he assured that his co-conspirators and subordinates submitted collusive, non-competitive, bids on the marine con-

rive in the Santa Barbara Channel yet this year.

At first, when the federal indictments for conspiracy and mail fraud were handed down in December, all six indicted Brown & Root and McDermott executives entered "not guilty" pleas. A seventh top executive, a vice-president for Brown & Root entered a "nolo contendere" plea on lesser charges and reportedly entered into a plea bargaining arrangement with federal prosecutors.

In February, McDermott's chief executive officer resigned, citing health reasons. A month later he pleaded "nolo contendere" to one count of conspiracy and three counts of wire and mail fraud. He was sentenced to a suspended three-year jail term and fined \$103,000 for his participation in the price-fixing scheme. His successor faces similar charges this month.

A month later, in March, two other high-ranking officers entered pleas of "nolo contendere." An executive vice-president of McDermott and a senior vice-president of Brown & Root pleaded no contest to the charges of conspiracy and mail fraud, and both are believed to be cooperating with the government in future investigations of the offshore construction industry.

The trail set for this month for the three remaining indicted officers of Brown & Root, Inc. and the J. Ray McDermott Co. is expected to uncover yet more detail in the price-fixing collusion between these two giant construction firms. Given the lack of attention in commercial media to the offshore industry in general and the dominating open-shop construction firms in particular, future issues of this magazine will continue with subsequent news of what is now regarded as one of the largest swindles in corporate America in this century.

struction projects selected by the conspirators. Initially, Bailey was in charge of McDermott's structure fabrication yard, and he rigged bids for the fabrication and installation of fixed offshore structures. However, as Bailey's responsibilities within the company expanded and he was placed in charge of undersea pipeline design, engineering, fabrication, and installation he and his subordinates rigged bids in this area also. Both of these areas, fixed offshore structures, and submarine pipelines, were part of the conspiracy before Bailey had charge of them. He continued practices started by others. Bailey also attended meetings of the conspirators from time to time at which matters of interest to the conspiracy were discussed and decided. Thus, Bailey was involved in selecting, preparing, formulating, approving, and quoting collusive bids.

Henry Rogers Reeves—From the time Reeves joined the conspiracy in 1971, he participated by selecting marine construction projects which were to be rigged. He discussed these projects with his co-conspirators at Brown & Root and his co-conspirators at McDermott, and he assured that his co-conspirators and subordinates submitted collusive, non-competitive, bids on the marine construction projects selected by the conspirators.

Reeves was involved primarily in rigging bids for the engineering, fabrication, and installation of undersea pipelines. He became a member of the conspiracy when he was Assistant Division Manager of McDermott's marine pipeline division. The conspiracy was ongoing when he joined. Reeves became Division Manager, and then a Vice-President in charge of McDermott's undersea pipeline division. Like his predecessor, Reeves initiated his assistants into the conspiracy.

Reeves also attended meetings of the conspirators from time to time at which matters of interest to the conspiracy were discussed and decided. Thus, Reeves was involved in selecting, preparing, formulating, approving, and quoting collusive bids.

Hugh Westcott Gordon—From the time Gordon joined the conspiracy, he participated by selecting marine construction projects which were to be rigged. He discussed these projects with his co-conspirators at McDermott and Brown & Root, and the foreign firm after 1970, and he assured that his co-conspirators and subordinates submitted collusive, non-competitive, bids on the marine construction projects selected by the conspirators. Initially, Gordon was in charge of Brown & Root's marine construction activities in waters outside of the United States. In 1970, he sent a subordinate of his, who he had initiated into the conspiracy earlier, to the meeting between Brown & Root, McDermott, and the foreign firm referred to previously. In that same year, Gordon became executive vice-president over all of Brown & Root's marine construction activities. In this position, he was kept advised of bid-rigging activities by his subordinates who were conspirators, and he participated directly from time to time.

Gordon also attended meetings of the conspirators in New Orleans, Houston, and elsewhere, at which matters of interest to the conspiracy were discussed and decided. Thus, Gordon was involved in selecting, preparing, formulating, approving, and quoting collusive bids.

Edward Lacy Tallichet—When Tallichet first became a member of the conspiracy, he was told about the conspiracy by his immediate superior in Brown & Root so that he would be in a position to take over that superior's duties on short notice. Thereafter, Tallichet participated in the rigging of marine construction project bids, from time to time. In 1973, Tallichet became more active, and in 1974, when he was promoted to Senior Vice-President in charge of Western Hemisphere marine pipelines he was fully active. Tallichet participated in the conspiracy by selecting marine construction projects which were rigged. He discussed these projects with his co-conspirators at McDermott, and Brown & Root and he assured that his co-conspirators and subordinates submitted collusive, non-competitive, bids on the marine construction projects selected by the conspirators. Tallichet also attended meetings of the conspirators in New Orleans, Houston, and elsewhere, at which matters of interest to the conspiracy were discussed and decided. Thus, Tallichet was involved in selecting, preparing, formulating, approving, and quoting collusive bids.

A General description of how the conspiracy operated.

McDermott and Brown & Root are the two largest marine contractors in the world. For a period of at least twenty years ending in December 1975, or early 1976, McDermott and Brown & Root, through various of their executives, including the defendants above, agreed to allocate between themselves selected marine construction projects let by customers for competitive bidding. The two firms allocated between themselves selected projects on a dollar-volume basis instead of submitting honest competitive bids. This was for the purpose and had the result of insuring that each would receive an approximately equal volume of the work which they made part of their scheme. In addition, as part of the conspiracy the firms entered into additional agreements, including agreements not to compete against each other in certain geographic areas, and agreements not to compete for work let by certain "reserved" customers. In addition, the two firms

A listing of each marine construction project the government may seek to prove at trial was collusively bid to prove the conspiracy and the scheme and artifice to defraud alleged in the indictment.

[Note: This list expressly excludes (1) marine construction projects bid for construction outside of the waters of the United States and (2) marine construction projects bid prior to January 1, 1971. A supplementary list providing the identity of projects bid prior to 1971, and projects bid for construction outside the waters of the United States which the Government may offer at trial as evidence against the defendants will be submitted to the defendants in the near future.]

This list is subject to correction, supplementation, and amendment to insure its accuracy.

2/22/71	11/30/71				
Humble Oil	Texas Eastern				
Structure	3 Pipelines				
Offshore California	Gulf of Mexico				
5/24/71	1/19/72				
Tennessee Gas	Sun Oil				
Pipeline	Structure				
Gulf of Mexico	Gulf of Mexico				
5/28/71	1/31/72				
Natural Gas Pipeline	Union Oil				
3 Pipelines	Pipeline				
Gulf of Mexico	Offshore Alaska				
6/17/71	3/29/72				
Gulf Refining Co.	Sea Robin Pipeline				
Pipeline	9 Pipelines				
Gulf of Mexico	Gulf of Mexico				
6/21/71	4/12/72				
Southern Natural Gas	Texas Eastern				
Pipeline	3 Pipelines				
Gulf of Mexico	Gulf of Mexico				
7/12/71	5/19/72				
Texaco	Michigan-Wisconsin				
Structure	Pipeline				
Gulf of Mexico	Gulf of Mexico				
8/16/71	6/02/72				
Shell	Pennzoil-United Gas				
Structure	2 Pipelines				
Gulf of Mexico	Gulf of Mexico				
8/25/71	8/14/12				
Tennessee Gas	Trunkline				
Pipeline	Pipeline				
Gulf of Mexico	Gulf of Mexico				
8/25/71	11/06/72				
Tennessee Gas	Stingray				
Pipeline	13 Pipelines				
Gulf of Mexico	Gulf of Mexico				
8/30/71	1/09/73				
Sea Robin Pipeline	Stingray				
2 Pipelines	Pipeline				
Gulf of Mexico	Gulf of Mexico				
9/03/71	2/12/73				
Columbia Gulf	Tennessee Gas				
2 Pipelines	5 Pipelines				
Gulf of Mexico	Gulf of Mexico				
11/27/71	3/12/73				
Shell	Gulf Refining				
Structure	3 Pipelines				
Gulf of Mexico	Gulf of Mexico				
		5/22/73	Pipeline	1/25/74	2 Pipelines
		Sea Robin Pipeline	Gulf of Mexico	Columbia Gulf	Gulf of Mexico
		Pipeline	10/05/73	2 Pipelines	7/09/75
		Gulf of Mexico	Tenneco	Gulf of Mexico	Trunkline
		5/29/73	Structure	7/05/74	5 Pipelines
		Tennessee Gas	Gulf of Mexico	Conoco	Gulf of Mexico
		2 Pipelines	10/24/73	Structure	7/14/75
		Gulf of Mexico	Texaco	Gulf of Mexico	Natural Gas Pipeline
		5/29/73	Structure	1/29/75	Pipeline
		Tennessee Gas	Gulf of Mexico	Tennessee Gas	Gulf of Mexico
		Pipeline	11/30/73	3 Pipelines	11/05/75
		Gulf of Mexico	Shell Pipeline	Gulf of Mexico	Columbia Gulf
		6/01/73	Pipeline	1/29/75	Pipeline
		Southern Natural	Gulf of Mexico	Texas Eastern	Gulf of Mexico
		Pipeline	1/07/74	3 Pipelines	12/10/75
		Gulf of Mexico	Texas Eastern	Gulf of Mexico	Texas Pipeline Co.
		9/21/73	6 Pipelines	6/09/75	Pipeline
		Texas Eastern	Gulf of Mexico	Columbia Gulf	Gulf of Mexico

attempted on varying occasions to agree to and enforce standard terms in the contracts which they offered to their customers.

In all segments of the conspiracy collusive bids were created and submitted in a similar fashion, with limited exceptions based usually upon the scope or geographic location of the work to be performed. The following description applies equally to these areas in which the foreign firm conspired with Brown & Root and McDermott.

McDermott and Brown & Root normally each received a customer's "bid invitation" or "tender." The invitation and accompanying materials described the type of construction services the customer required, the location(s) in which the work was to be performed, and the details regarding materials, special fixtures, and other specifications. The contractors were requested to submit competitive quotations or bid prices for which each was willing to contract to perform the work described in the bid invitation.

The gist of the conspiracy was to allocate on an equal dollar volume basis any projects which were susceptible to successful collusion. Whether a project could be rigged was principally determined by two factors. The first was whether any other contractor could successfully compete with McDermott and Brown & Root for the project. For example, in the Gulf of Mexico during the last ten years of the conspiracy there were several other marine contractors able to install small diameter subsea pipelines, often at lower prices than McDermott and Brown & Root. Thus, the conspirators did not normally attempt to rig bids for small diameter pipelines. The second factor was whether the responsible officials in both firms could agree that the particular project should be bid collusively. This was usually decided on the basis of which firm "needed" the work, or which was behind on the "score card" which recorded the projects which had been rigged by them in the past, and the dollar volume of those projects. Separate score cards were kept for the various segments in which the conspiracy operated. Separate balances were kept in those segments. Thus, for example, if Brown & Root was behind on a score card when a project susceptible to successful collusion was put out for bids, a Brown & Root conspirator would contact his counterpart at McDermott and "claim" it. Thereafter each firm computed its bid cost estimates and added a desired amount for profit to their respective bids. Prior to submitting their bids to the customer, the conspirators contacted each other in person or by telephone to compare and adjust their prices to assure the outcome. If, for example, Brown & Root, had claimed a job and had a higher bid than McDermott, then McDermott would increase its bid to "cover" the Brown & Root price. In all cases, the firm claiming the bid calculated its desired profit with the advance knowledge that it would win the bid.

A general description of the methods by which the objects of the conspiracy were obtained.

The object of the conspiracy was to divide the market for marine construction, and to raise, fix, maintain and stabilize the prices charged for marine construction. This object was achieved primarily through agreements to submit collusive bids on selected marine construction projects.

In addition to submitting collusive bids, the conspirators discussed the prices that they charged customers for "day rate" marine construction work, and signalled the order of magnitude by which such prices should be increased. The conspirators also entered into other agreements as part of the conspiracy, including agreements not to compete against each other in certain geographic areas, agreements not to compete for work let by certain "reserved" customers, and the two firms attempted on varying occasions to agree to and enforce standard terms in the contracts which they offered to their customers.

[Newspaper article from the Washington Post, Mar. 2, 1979]

BROWN & ROOT ESCAPES NEXT YEAR'S IMPORT DUTY ON OIL DRILL PLATFORMS

(By Helen Dewar, Washington Post Staff Writer)

The United States will begin imposing import duties on oil drilling platforms, but only after two multimillion-dollar rigs being built by an American firm's subsidiary in Malaysia have slipped through the duty-free door.

Under an order signed Wednesday by President Carter that covers hundreds of changes in tariffs for underdeveloped countries, oil drilling platforms will be subject to a 9½ percent duty as of March 1, 1980.

The 1980 effective date means that two platforms under construction by the Malaysian subsidiary of Brown & Root Inc., a Houston-based construction company and one of the world's largest makers of oil platforms, will be admitted duty-free, according to administration trade officials.

A so-called Generalized System of Preferences (GSP) was set up in 1974 to help Third World countries by excluding many of their developing industries from U.S. import duties. The list of duty-free items has now grown to about 2,700, amounting to roughly \$5 billion in trade annually.

When the government said last year that oil platforms qualified for GSP treatment, the International Association of Iron Workers filed a protest and was joined by other unions, several domestic steel companies and about 60 congressmen led by Rep. George Miller (D-Calif.).

Miller contended that Congress did not intend for "runaway U.S. corporations," seeking tax benefits and lower wages by moving production facilities abroad, to benefit from tariff exemptions.

Carter's order reflected an earlier decision by the Trade Policy Staff Committee, an interagency group, that oil platforms should be removed from the GSP list next year, after the Malaysian project was completed.

Trade officials said the duty would not be imposed on Brown & Root because construction contracts were based on an assumption that the platforms, which will be floated from Malaysia to the Santa Barbara Channel off California sometime during the next 12 months, would be duty-free.

This assumption was challenged yesterday by Iron Workers President John H. Lyons, who said Brown & Root refused to say on the public record whether it could have competed for the contract without the duty exemption. Lyons said he was pleased that future projects will be covered by duties but will continue to seek duties for the Brown & Root platforms.

[From the Washington Post, Feb. 2, 1979]

DUTY-FREE PLAN COULD BENEFIT BIG TEXAS FIRM

(By Helen Dewar, Washington Post Staff Writer)

Three years ago the United States opened its doors to duty-free imports of a vast variety of goods from Third-World countries, running the gamut from ale to zinc.

Now it appears that the helping hand extends to the maker of two multimillion-dollar oil drilling and production platforms that are under construction in Malaysia.

And the struggling entrepreneur turns out to be Brown & Root Inc., a Houston-based giant of the American construction industry.

The result has been cries of protest from Congress, the domestic steel industry and labor unions, along with an official petition for exclusion of the platforms from the list of 2,700 Third-World items eligible for duty-free treatment.

At a hearing on the petition last week before the U.S. Trade Policy Staff Committee, Brown & Root defended its use of a wholly-owned subsidiary in Malaysia to build the platforms for export—presumably duty-free—to the Santa Barbara Channel off California.

"In fact," said John Christian Archer, director of federal relations for Brown & Root, "the Malaysian fabrication yard is * * * precisely the kind of economic development Congress sought to encourage" in giving trade preferences to many commodities from underdeveloped countries.

Taking issue with Brown & Root's claim was Rep. George Miller (D-Calif.), who joined with 60 other members of Congress in urging exclusion of offshore oil platforms from the so-called Generalized System of Preferences (GSP) that exempts selected Third-World imports from duties.

"I strongly doubt that you would find many members of Congress who interpreted the GSP as such an incentive for runaway U.S. corporations" that set up production

facilities in selected countries "for the purpose of picking up not only the lower wage and foreign tax benefits, but the duty-free benefits as well," said Miller. "But that is unfortunately the way it is being abused," he added.

The GSP was included in the 1974 Trade Act to assist the economic development of poor countries, and has grown into a list of about 2,700 trade items from 127 countries for which the United States will waive import duties. Collectively, this duty-free trade amounted to \$4.2 billion for the first 10 months of 1978, more than \$12 billion more than the total for 1977, according to government statistics.

The duty-free items include a virtual trade bazaar, ranging from shark oil, coconuts, Ping-Pong balls, clothespins and lace handkerchiefs to television sets, steam engines, railway cars—and now offshore oil platforms.

Until the mid-1970s, oil platforms were not a trade issue because all that were purchased for use in U.S. waters were made domestically. But opposition emerged when foreign yards (one in Japan and the Brown & Root subsidiary in Malaysia) won bids for three of four platforms bought for use in the Santa Barbara Channel and U.S. Customs rules that the Malaysia-made platforms would qualify for a duty exemption if they met GSP requirements.

The duty, if paid, would be 9½ percent—meaning a savings of that amount for Brown & Root if it qualified for the exemption.

The Iron workers International Union, which initiated the petition to require that duties be paid on all platforms, stumbled almost accidentally across Brown & Root's involvement in the Malaysian project.

At first the union assumed it was a Japanese endeavor and was prepared to fight it on those grounds, according to William Lawbaugh, trade specialist for the union. Only later, Lawbaugh said, did he read a trade journal article indentifying the company as a Brown & Root subsidiary.

But the union still contends that the steel is largely fabricated in Japan and run through the Malaysian plant largely to qualify for the duty exemption—a charge that Brown & Root's Archer denied.

Archer told the governments' trade panel that the steel arrived as "raw material" and was processed by a work force that consisted of 10 Americans, 3 Britons, 1 Australian, and 621 Malaysians. "There is no economic incentive to serve merely as an assembly yard for prefabricated steel production," he said.

Archer also noted that the company, one of the world's largest producers of oil platforms, has plans well under way for fabrication plants on both coasts of the United States saying they will provide "thousands of American jobs."

Miller contended that, unless domestic facilities are protected from duty-free competition from abroad, the West Coast alone stands to lose "in excess of one-third of a billion dollars" in wages anticipated over the next five years.

Unions and other groups have lodged numerous complaints about duty-free foreign competition that threatens American jobs, but this is believed to one of the first involving high-technology production abroad by a major U.S. based corporation.

[From the AFL-CIO News, Feb. 17, 1979]

U.S. URGED TO CLOSE TARIFF LOOPHOLE ON OFFSHORE OIL DRILLING PLATFORMS

A giant American construction company stands to save about \$4 million in U.S. import duties by having some fabrication work done on offshore oil drilling rigs in Malaysia before erecting them in California's Santa Barbara channel.

Brown & Root Inc. of Houston will be able to capitalize on the duty-free loophole if the U.S. Trade Policy Staff Committee rejects a petition from the Iron Workers.

Under the 1974 Trade Act, Malaysia qualifies for duty-free status on the Generalized System of Preferences (GSP) because it is a "lesser developed country." Currently, oil drilling platforms are among the 2,700 Third World items eligible for import into the United States duty-free.

The Iron Workers' petition asks the governmental inter-agency trade panel to remove offshore platforms from the GSP list and subject them to regular import duties of 9.5 percent.

In a letter to the trade panel, Iron Workers President John H. Lyons charged that Malaysia employees of the Brown & Root subsidiary are doing only low-skill work on the platforms, while highly technical fabrication work is being done in Japan by firms partly or totally owned by the Houston-based corporation.

Japanese exports to the United States are not eligible for duty-free privileges. Brown & Root has contracts for the construction of one drilling platform from Chevron and two from Shell Oil that will be erected in California waters. One platform is being totally fabricated in Japan and the other two are being built through Brown & Root's Japanese-Malaysian venture.

The shifting of the fabrication operations to the Orient cost the U.S. economy more than one million manhours of work and about \$40 million, the Iron Workers pointed out.

The union has expressed concern that there may be long-range impact on American employment and the economy if additional drilling platforms are constructed overseas.

Petroleum industry estimates for offshore drilling activity over the next 10 years cite a need for as many as 180 oil platforms on the West Coast alone. Several hundred may be needed on the East Coast if substantial amounts of oil are discovered in the Baltimore Canyon.

AFL-CIO Research Director Rudy Oswald said in a letter to the trade panel that application of the duty-free privilege for drilling platforms makes a mockery of the intent of Congress in passing the 1974 Trade Act and the Outer Continental Shelf Act.

Referring to provisions of the Outer Continental Shelf Act, Oswald noted that Congress directed the Customs Service to place tariffs on steel platforms because it did not intend to subsidize foreign contractors.

"The GSP systems can be used to help multinationals avoid paying tariffs and avoid helping developing countries," Oswald stressed. "In the case of oil drilling platforms, the GSP becomes a means of subsidizing the export of technologically sophisticated production to foreign countries and to use worksites in developing countries as 'launching platforms' to U.S. markets."

He said that few, if any, developing countries possess the technology required for the construction of the drilling platforms.

That point was reinforced by Lyons, who noted that Malaysia lacks a domestic steel industry to meet the needs of platform construction and that "the Malaysia stopover is just a subterfuge to gain windfall benefits."

President Jacob Clayman of the AFL-CIO Industrial Union Dept. pointed out at a public hearing that the duty-free privilege on imported items may be granted only by Executive Order of the President, not by staff members of the Customs Service.

A Customs Service official granted the GSP status for the platforms last May, about the same time that Brown & Root landed the contracts for the fabrication of the three drilling rigs.

STATEMENT OF J. WESLEY ROGERS, VICE PRESIDENT, BLOCKER ENERGY CORP.

My name is J. Wesley Rogers. I am Vice President and Chief Financial Officer of Blocker Energy Corporation, which is primarily a drilling contractor operating twenty-six rigs in Texas, Canada, and South America and which has a small exploration and production subsidiary. We have partial ownership of one offshore tract, but we'd like to get more. My career has been focused on the financial and economic aspects of the energy business. My masters degree is in business administration and international finance, while my undergraduate training was in chemical and petroleum engineering. Prior to joining Blocker, my work was as an investment banker concentrating solely on the economics and requirements of the oil and gas industry.

I am submitting this statement on behalf of Blocker Energy Corporation. We are one of the small companies that the Congress often says it wants to assist in getting into operations offshore. We appreciate that sentiment when properly directed. Presently the majority of our business is onshore. We would like general offshore business assistance such as a more favorable investment climate i.e. tax credits, foreign operations, and investment opportunities. We want to progress offshore, but not by 1) harming the country or 2) by taking advantage of punitive government arrangements against large companies. This second factor is important. As any small company, Blocker has designs on someday becoming a larger company. For us this means a double benefit for ourselves and the increased energy supplies our country needs. If we accomplish this both Blocker and America win. In addition, punitive arrangements against large companies -- based on the mistaken assumption that they are helping companies like Blocker -- are actually detrimental to small firms.

A case in point is the proposed "on-structure" drilling provision now under consideration by the Department of the Interior. I would like to offer our views why this is both unwise from our energy standpoint as well as being a potentially illegal interpretation of congressional intent. Thus, I appreciate this opportunity to offer Blocker Energy Corporation's comments for the record on the proposed revision of 30 CFR, Part 251 -- Geological and Geophysical Exploration of the Outer Continental Shelf.

Specifically, I would like to address three points which relate to the proposed plan for pre-lease, on-structure drilling.

First, for the benefit of our country a primary objective should be the discovery and development of domestic energy resources. Our growing dependence on imported energy is a problem from a financial balance of payments perspective as well as from a strategic perspective. To strengthen our position from both points, we must move toward self-sufficiency of our energy needs.

The U.S. will spend close to \$50 billion this year for the import of energy. This increasing amount has been the primary contributor to our negative balance of payments which has in turn eroded the stability and the power of the dollar in the world currency markets.

There is also the strategic consideration of importing approximately one-third of our oil and gas needs or almost one quarter of our total energy requirements. I think we all agree on the seriousness of this problem, and while the Strategic Petroleum Reserve was intended to off-

set this, it is doubtful it will ever provide more than a short term benefit.

Thus, the only solutions to the economic and strategic problem of importing over a \$100 million/day of crude are to either reduce consumption or to find new domestic production. Even if we can markedly decrease consumption, there will still be a need to find new production to both replace declining domestic reserves as well as to offset imports.

The Outer Continental Shelf Lands Act Amendments of 1978, Section 102 states that one of the purposes of the Act is to:

" (1) establish policies and procedures for managing the oil and natural gas resources of the Outer Continental Shelf which are intended to result in expedited exploration and development of the Outer Continental Shelf in order to achieve national economic and energy policy goals, assure national security, reduce dependence on foreign sources, and maintain a favorable balance of payment in world trade; "

There are several reasons that on-structure testing without the right to develop and produce would have a negative effect on the expedited development of OCS resources. One test well does not confirm nor condemn a single prospect -- much less confirm nor condemn an entire area -- so I assume that there would be multiple tests in a basin or area so as not to overlook potential reserves. This multiple testing would further slow development. Even in industry where there are large and sophisticated exploration staffs, there is not a single company capable of concurrently testing and evaluating several areas. Also, different geophysical staffs have different theories on hydrocarbon formation, which results in different groups being interested in different tracts. There are numerous examples -- East Texas to Prudhoe Bay to Southern California -- where conventional wisdom and initial wells uncovered nothing, only to have subsequent efforts

uncover substantial reserves. Thus, the current practice of having numerous companies simultaneously testing and developing leased tracts results in both more thorough and more rapid development of the OCS.

While the rapid and thorough development of reserves is of primary importance, there is a second point which is more in line with my financial perspective. Proponents of pre-lease on-structure tests have theorized that the public would receive a higher value for the leases if the government first knew where reserves were located. I believe that a review of the economics of offshore leases shows that the composite return on offshore lease has been poor, and that the government would actually receive less if on-structure testing became reality.

Yes, individual tracts have been very profitable and individual companies have done well ... and it is this prospect of success that keeps the lease bonuses high. However, the over-all return on investment has been marginal; and if the risk/reward principles were removed, lease bonuses would be less.

For the period of 1953-1977, the government received 76% of total OCS revenue (or \$25 of 33 billion) in the form of bonus, rental, and royalty payments.

	<u>Billion \$</u>	<u>%</u>
Total Production Revenue	33.3	100%
Government Revenue		
Bonus	19.7	59
Rental	0.2	1
Royalty	5.5	16
	<u>25.4</u>	<u>76%</u>
Gross Revenue to Industry	<u>7.9</u>	<u>24%</u>

When one deducts the costs of exploration and development and then considers the time factor of money and that the largest expenditures came in the early years of a project, it is simple to see that the composite discounted cash flow return on investment becomes marginal. Numerous studies have shown the composite expected after tax return will be only 7 to 9 percent, which does not compensate a company for the risk inherent in the offshore exploration expenditure. It is my contention that it is only the potential of a large discovery, or in essence companies gambling on their unique expertise and analysis of the lease tract, which causes the government to receive as much in bonus revenue as it does. Strong evidence of this competition is the fact that in eleven lease sales from 1973-1976, the winning bids of \$8.9 billion exceeded the second highest bids by \$4.2 billion -- or 47 percent more than the next highest estimate of value. If the government could accurately define the potential of a structure, the industry would pay lower bonuses and royalties which would allow a greater return on investment than is now being received on a composite basis.

There are many examples which support the viewpoint that reduced bonuses are necessary in order to allow sufficient risk adjusted returns. Just one example is a summary of the discounted rate of return for Gulf of Mexico federal leases issued in years prior to 1969.¹ The cutoff of 1969 was chosen since it takes 4 to 8 years after a lease sale to get production onstream and then several years of production history are required to accurately determine the life of the reservoir. A later

¹Data base "LPR-19C Data Base Economic Analysis Package" by Elmendorf and Boone, CSC Infonet, Denver, July, 1978

cutoff date would have necessitated more extensive probabilities and estimates.

Based on leases in those years (a total of 1,223 issued leases) and estimating their production through the year 2010, the composite discounted cash flow rate of return was only 8.9 percent. Of the total issued leases, only 276 (or 23 percent) have positive rate of returns -- thus 77 percent of the leases were losers when one considers the time factor of money. One could say that many of that 77 percent would never have been developed if on-structure testing had been in place. While this may have been preferable from a financial standpoint, many of those leases produced substantial oil and gas reserves -- which is the first priority. Only the current system would cause the exploitation of all of the 1,223 leases -- even when a majority of them were uneconomical.

Besides my earlier two points, there is an important third reason why I would urge this Committee to pay particular attention to the Department of the Interior's proposed revision of 30 CFR, Part 251. Blocker Energy Corporation interprets the OCS Amendments as denying the Secretary the statutory authority to authorize pre-lease, on-structure drilling. During the debate of the 1978 Amendments, all specific references to on-structure drilling were deleted and original language of the 1953 law was retained. This language has consistently been interpreted as authorizing a pre-lease off-structure drilling program -- the COST wells -- which are aimed at obtaining geological and geophysical data only. We believe that the drilling of a well or wells on-structure is tantamount to drilling for oil or gas. Presently this right has been granted in statute only to those who are lawfully in possession of a lease.

Apart from the legal implications, let me speculate a chain of probable events should either of two extremes occur with on-structure drilling.

First, if oil and/or gas are found in the first test hole, there would naturally be a call for more testing to define the extent and commerciability of the field to assess -- as close as is humanly possible -- the value of the tract before a sale. After a find it would be very difficult to stop "defining" a field and after "defining" it, there would be great pressure for the government not to lease it to private enterprise. Therefore, after drilling, the government might decide to become an operator, hire a drilling contractor, and begin to produce oil and gas.

In the second more likely scenario, nothing would be found. Would drilling stop after one dry, on-structure hole? Five? Ten? Twenty? Once on-structure drilling begins, where would it end?

The question is frequently posed to offshore executives, "If pre-sale, on-structure drilling were held would your company participate?" Well, Blocker Energy Corporation could not from a financial standpoint. We are just barely participating in offshore development now. The larger companies respond that they would be extremely reluctant to enter a lease sale with any less information than potential bidders. So, effectively, a situation would arise where the larger companies with the financial wherewithal would be drawn into on-structure drilling whereas the small companies would be left out. Blocker Energy Corporation, as a small company, does not have the financial luxury to participate in on-structure

drilling like the larger companies would. This in effect would widen the competitive information gap the big companies have over small companies like Blocker Energy Corporation.

SUMMARY

Blocker Energy Corporation believes that the implementation of "on-structure testing" would be detrimental to the public from three viewpoints. First, it would delay the discovery and development of needed hydrocarbon reserves, and it would also reduce the amount of reserves discovered because the marginal areas would not be developed. Second, on-structure testing would reduce the income to the government as currently received from OCS lands, because bonuses would be less once the risk/potential reward factor is removed by the leasing of "tested" acreage. Third, on-structure drilling is of questionable legality from a congressional intent standpoint. It will not assist small companies who hope to play a more major role in offshore energy development. For these reasons, we believe that "on-structure testing" should not replace the current system of numerous companies using different techniques to simultaneously evaluate and develop the maximum amount of oil and gas available. I would hope this Committee would continue its aggressive oversight of the various agencies charged with writing the regulations to implement the OCS law. Congressional intent and equity to all companies and U.S. citizens must be of paramount importance.

Thank you for affording me this written opportunity to express our views.

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